Algebra II
Lesson #1 Unit 5
Class Worksheet #1
For Worksheet #1

Square Root and Cube Root

Square Root and Cube Root

Definitions and Notation

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Square Root	Cube Root
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The number k is a square root of N if and only if $k^2 = N$. Using this definition, it is clear that the number 9, for example, has two square roots. They are 3 and -3, since $3^2 = 9$ and $(-3)^2 = 9$.

If you used a calculator to find the square root of 9, you would get 3. That is because the calculator is programmed to give the principal, or the non-negative, square root of a number.

The notation that is used for the principal square root of N is $\sqrt{N}$. This leads us to the definition of principal square root.

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

The number k is a cube root of N if and only if $k^3 = N$. Using this definition, it is clear that the number 8, for example, has one cube root. The cube root of 8 is 2, since $2^3 = 8$.

The notation that is used for the cube root of N is $\sqrt[3]{N}$. This leads us to the definition of cube root.

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

General Notation For Roots

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

General Notation For Roots (Also Called Radicals)

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

General Notation For Roots (Also Called Radicals)

$$\sqrt[a]{N}$$

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

General Notation For Roots (Also Called Radicals)

The number here is called the index.

$$\sqrt[a]{N}$$

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

General Notation For Roots (Also Called Radicals)

The number here is called the index.

$$\sqrt[a]{N}$$

The 'check mark' part of the symbol is called the radical sign.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

General Notation For Roots (Also Called Radicals)

The number here is called the index.

The horizontal bar is called the vinculum.

$$\sqrt[a]{N}$$

The ‘check mark’ part of the symbol is called the radical sign.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

General Notation For Roots (Also Called Radicals)

The number here is called the index.

The horizontal bar is called the vinculum.

$$\sqrt[a]{N}$$

N, which can be a number or an algebraic expression, is called the radicand.

The 'check mark' part of the symbol is called the radical sign.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

General Notation For Roots (Also Called Radicals)

The number here is called the index.

The horizontal bar is called the vinculum.

$$\sqrt[a]{N}$$

N, which can be a number or an algebraic expression, is called the radicand.

The 'check mark' part of the symbol is called the radical sign.

The number that is used for the index <u>always</u> agrees with the exponent in the definition.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

General Notation For Roots (Also Called Radicals)

The number here is called the index.

The horizontal bar is called the vinculum.

$$\sqrt[a]{N}$$

N, which can be a number or an algebraic expression, is called the radicand.

The 'check mark' part of the symbol is called the radical sign.

The number that is used for the index always agrees with the exponent in the definition. If the index number is 'missing', it is understood to be a 2.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} =$

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} =$

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} =$

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} =$????

We need a number k

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} = ????$

We need a number k such that $k^2 = -4$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} =$????

We need a number k such that $k^2 = -4$. Clearly, the number we seek does not exist in the real number system.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

We need a number k such that $k^2 = -4$. Clearly, the number we seek does not exist in the real number system. Numbers like $\sqrt{-4}$ do exist however.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} = ????$

We need a number k such that $k^2 = -4$. Clearly, the number we seek does not exist in the real number system. Numbers like $\sqrt{-4}$ do exist however. They are elements of another set of numbers called the <u>imaginary</u> <u>numbers</u>.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

We need a number k such that $k^2 = -4$. Clearly, the number we seek does not exist in the real number system. Numbers like $\sqrt{-4}$ do exist however. They are elements of another set of numbers called the <u>imaginary numbers</u>. For now, we are only dealing with <u>real numbers</u>.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

We need a number k such that $k^2 = -4$. Clearly, the number we seek does not exist in the real number system. Numbers like $\sqrt{-4}$ do exist however. They are elements of another set of numbers called the <u>imaginary</u> <u>numbers</u>. For now, we are only dealing with <u>real</u> <u>numbers</u>. Therefore, the radicand can not be negative.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

$\sqrt{5}$ =

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

$\sqrt{5}$ = ????

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} =$????

$\sqrt{5} =$????

If the radicand is a 'perfect square',

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} = ????$

$\sqrt{5} = ????$

If the radicand is a 'perfect square',

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

→ $\sqrt{9} = 3$, since $3^2 = 9$.

→ $\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} = ????$

$\sqrt{5} = ????$

If the radicand is a ‘perfect square’, then the problem ‘comes out even’.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} = ????$

$\sqrt{5} = ????$

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a rational number.)

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} =$????

$\sqrt{5} =$????

If the radicand is a ‘perfect square’, then the problem ‘comes out even’. (The square root represents a rational number.)

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

$\sqrt{5}$ = ????

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a rational number.) If the radicand is positive and not a perfect square,

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

→ $\sqrt{5}$ = ????

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a rational number.) If the radicand is positive and not a perfect square,

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

→ $\sqrt{5}$ = ????

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a rational number.) If the radicand is positive and not a perfect square, then the square root represents an irrational number.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} =$????

→ $\sqrt{5} =$????

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a rational number.) If the radicand is positive and not a perfect square, then the square root represents an irrational number. In this case, the square root can either be approximated using a calculator

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

→ $\sqrt{5} \approx 2.236$

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a <u>rational number</u>.) If the radicand is positive and not a perfect square, then the square root represents an <u>irrational number</u>. In this case, the square root can either be approximated using a calculator

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} = ????$

→ $\sqrt{5} \approx 2.236$

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a rational number.) If the radicand is positive and not a perfect square, then the square root represents an irrational number. In this case, the square root can either be approximated using a calculator, or the exact value can be written using standard radical form.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

$\sqrt{5} \approx 2.236$

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a rational number.) If the radicand is positive and not a perfect square, then the square root represents an irrational number. In this case, the square root can either be approximated using a calculator, or the exact value can be written using standard radical form.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} = ????$

$\sqrt{5} \approx 2.236$

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a <u>rational number</u>.) If the radicand is positive and not a perfect square, then the square root represents an <u>irrational number</u>. In this case, the square root can either be approximated using a calculator, or the exact value can be written using <u>standard radical form</u>.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} = ????$

$\sqrt{5} \approx 2.236$

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a rational number.) If the radicand is positive and not a perfect square, then the square root represents an irrational number. In this case, the square root can either be approximated using a calculator, or the exact value can be written using standard radical form.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} = ????$

$\sqrt{5} \approx 2.236$

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a <u>rational number</u>.) If the radicand is positive and not a perfect square, then the square root represents an <u>irrational number</u>. In this case, the square root can either be approximated using a calculator, or the exact value can be written using <u>standard radical form</u>.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Consider the following.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} =$????

$\sqrt{5} \approx 2.236$

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a rational number.) If the radicand is positive and not a perfect square, then the square root represents an irrational number. In this case, the square root can either be approximated using a calculator, or the exact value can be written using standard radical form.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Consider the following.

$\sqrt[3]{8} =$

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

$\sqrt{5} \approx 2.236$

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a <u>rational number</u>.) If the radicand is positive and not a perfect square, then the square root represents an <u>irrational number</u>. In this case, the square root can either be approximated using a calculator, or the exact value can be written using <u>standard radical form</u>.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Consider the following.

$\sqrt[3]{8} = 2$

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4} = ????$

$\sqrt{5} \approx 2.236$

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a rational number.) If the radicand is positive and not a perfect square, then the square root represents an irrational number. In this case, the square root can either be approximated using a calculator, or the exact value can be written using standard radical form.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Consider the following.

$\sqrt[3]{8} = 2$, since $2^3 = 8$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Consider the following.

$\sqrt{9} = 3$, since $3^2 = 9$.

$\sqrt{0} = 0$, since $0^2 = 0$.

$\sqrt{-4}$ = ????

$\sqrt{5} \approx 2.236$

If the radicand is a 'perfect square', then the problem 'comes out even'. (The square root represents a rational number.) If the radicand is positive and not a perfect square, then the square root represents an irrational number. In this case, the square root can either be approximated using a calculator, or the exact value can be written using standard radical form.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

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Summary

If the radicand is a perfect square, then you will be asked to give the exact value.

If the radicand is negative, then the square root represents an <u>imaginary number</u>.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Summary

If the radicand is a perfect square, then you will be asked to give the exact value.

If the radicand is negative, then the square root represents an <u>imaginary number</u>. You will be asked to express the square root as an imaginary number in 'simplest form'.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Square Root and Cube Root

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If the radicand is positive and not a perfect square,

Cube Root

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Square Root and Cube Root

Definitions and Notation

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If the radicand is positive and not a perfect square, then you will be asked to write the square root using standard radical form.

Cube Root

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Square Root and Cube Root

Definitions and Notation

Square Root

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Summary

Square Root and Cube Root

Definitions and Notation

Square Root

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If the radicand is positive and not a perfect square, then you will be asked to write the square root using <u>standard radical form</u>.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Summary

If the radicand is a perfect cube,

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Summary

If the radicand is a perfect square, then you will be asked to give the exact value.

If the radicand is negative, then the square root represents an imaginary number. You will be asked to express the square root as an imaginary number in 'simplest form'.

If the radicand is positive and not a perfect square, then you will be asked to write the square root using standard radical form.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Summary

If the radicand is a perfect cube, then you will be asked to give the exact value.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Summary

If the radicand is a perfect square, then you will be asked to give the exact value.

If the radicand is negative, then the square root represents an <u>imaginary number</u>. You will be asked to express the square root as an imaginary number in 'simplest form'.

If the radicand is positive and not a perfect square, then you will be asked to write the square root using <u>standard radical form</u>.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Summary

If the radicand is a perfect cube, then you will be asked to give the exact value.

If the radicand is not a perfect cube,

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Summary

If the radicand is a perfect square, then you will be asked to give the exact value.

If the radicand is negative, then the square root represents an <u>imaginary number</u>. You will be asked to express the square root as an imaginary number in 'simplest form'.

If the radicand is positive and not a perfect square, then you will be asked to write the square root using <u>standard radical form</u>.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Summary

If the radicand is a perfect cube, then you will be asked to give the exact value.

If the radicand is not a perfect cube, then you will be asked to write the cube root using <u>standard radical form</u>.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Summary

If the radicand is a perfect square, then you will be asked to give the exact value.

If the radicand is negative, then the square root represents an imaginary number. You will be asked to express the square root as an imaginary number in 'simplest form'.

If the radicand is positive and not a perfect square, then you will be asked to write the square root using standard radical form.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Summary

If the radicand is a perfect cube, then you will be asked to give the exact value.

If the radicand is not a perfect cube, then you will be asked to write the cube root using standard radical form.

The cube root of a positive number is positive,

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N}$ = k if and only if k^2 = N and k $\geq$ 0.

Summary

If the radicand is a perfect square, then you will be asked to give the exact value.

If the radicand is negative, then the square root represents an <u>imaginary number</u>. You will be asked to express the square root as an imaginary number in 'simplest form'.

If the radicand is positive and not a perfect square, then you will be asked to write the square root using <u>standard radical form</u>.

Cube Root

$\sqrt[3]{N}$ = k if and only if k^3 = N.

Summary

If the radicand is a perfect cube, then you will be asked to give the exact value.

If the radicand is not a perfect cube, then you will be asked to write the cube root using <u>standard radical form</u>.

The cube root of a positive number is positive, and the cube root of a negative number is negative.

Square Root and Cube Root

Definitions and Notation

Square Root

$\sqrt{N} = k$ if and only if $k^2 = N$ and $k \geq 0$.

Cube Root

$\sqrt[3]{N} = k$ if and only if $k^3 = N$.

Summary

If the radicand is a perfect square, then you will be asked to give the exact value.

If the radicand is negative, then the square root represents an <u>imaginary number</u>. You will be asked to express the square root as an imaginary number in 'simplest form'.

If the radicand is positive and not a perfect square, then you will be asked to write the square root using <u>standard radical form</u>.

Summary

If the radicand is a perfect cube, then you will be asked to give the exact value.

If the radicand is not a perfect cube, then you will be asked to write the cube root using <u>standard radical form</u>.

The cube root of a positive number is positive, and the cube root of a negative number is negative.

Square Root and Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root and Cube Root

Standard Radical Form

Square Root

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number.

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is <u>not</u> a perfect square

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1,

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the expression is said to be in 'standard radical form'.

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is not a perfect square and does not have any perfect square factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in standard radical form.

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in <u>standard radical form</u>.

$\sqrt{5}$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in <u>standard radical form</u>.

$\sqrt{5}$ $\sqrt{6}$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in <u>standard radical form</u>.

$\sqrt{5}$ $\sqrt{6}$ $3\sqrt{10}$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in <u>standard radical form</u>.

$\sqrt{5}$ $\sqrt{6}$ $3\sqrt{10}$ $2\sqrt{3}$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is not a perfect square and does not have any perfect square factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in standard radical form.

$\sqrt{5}$ $\sqrt{6}$ $3\sqrt{10}$ $2\sqrt{3}$ $\sqrt{15}$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in <u>standard radical form</u>.

$\sqrt{5}$ $\sqrt{6}$ $3\sqrt{10}$ $2\sqrt{3}$ $\sqrt{15}$

In each case,

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in <u>standard radical form</u>.

$\sqrt{5}$ $\sqrt{6}$ $3\sqrt{10}$ $2\sqrt{3}$ $\sqrt{15}$

In each case, the <u>radicand</u>

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

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$\sqrt{5}$ $\sqrt{6}$ $3\sqrt{10}$ $2\sqrt{3}$ $\sqrt{15}$

In each case, the <u>radicand</u>

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in <u>standard radical form</u>.

$\sqrt{5}$ $\sqrt{6}$ $3\sqrt{10}$ $2\sqrt{3}$ $\sqrt{15}$

In each case, the <u>radicand</u> is a <u>whole number</u>

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in <u>standard radical form</u>.

$\sqrt{5}$ $\quad \sqrt{6}$ $\quad 3\sqrt{10}$ $\quad 2\sqrt{3}$ $\quad \sqrt{15}$

In each case, the <u>radicand</u> is a <u>whole number</u> that is <u>not</u> a perfect square

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

We will consider problems in which the radicand is a whole number. If the radicand is not a perfect square and does not have any perfect square factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in standard radical form.

$\sqrt{5}$ $\sqrt{6}$ $3\sqrt{10}$ $2\sqrt{3}$ $\sqrt{15}$

In each case, the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1.

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1,

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'.

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots.

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36}$$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is not a perfect square and does have perfect square factor(s) greater than 1, then the expression is not in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9}$$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is not a perfect square and does have perfect square factor(s) greater than 1, then the expression is not in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9} \overset{?}{=} \sqrt{4} \cdot \sqrt{9}$$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9} \overset{?}{=} \sqrt{4} \cdot \sqrt{9}$$

$\uparrow$

6

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9} \overset{?}{=} \sqrt{4} \cdot \sqrt{9}$$

$\sqrt{36}$ ↑ **6** $\sqrt{4}$ ↑ **2**

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9} \stackrel{?}{=} \sqrt{4} \cdot \sqrt{9}$$

$$\begin{array}{ccc} \uparrow & \uparrow & \uparrow \\ 6 & 2 \quad \cdot & 3 \end{array}$$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9} = \sqrt{4} \cdot \sqrt{9}$$

$$6 \qquad\qquad 2 \cdot 3$$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is not a perfect square and does have perfect square factor(s) greater than 1, then the expression is not in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

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Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is not a perfect square and does have perfect square factor(s) greater than 1, then the expression is not in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9} = \sqrt{4} \cdot \sqrt{9}$$

In general,

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9} = \sqrt{4} \cdot \sqrt{9}$$

In general, if <u>a</u> and <u>b</u> represent whole numbers,

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9} = \sqrt{4} \cdot \sqrt{9}$$

In general, if <u>a</u> and <u>b</u> represent whole numbers, then $\sqrt{a \cdot b}$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9} = \sqrt{4} \cdot \sqrt{9}$$

In general, if <u>a</u> and <u>b</u> represent whole numbers, then $\sqrt{a \cdot b} =$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9} = \sqrt{4} \cdot \sqrt{9}$$

In general, if <u>a</u> and <u>b</u> represent whole numbers, then $\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}$.

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9} = \sqrt{4} \cdot \sqrt{9}$$

In general, if <u>a</u> and <u>b</u> represent whole numbers, then $\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}$.

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is <u>not</u> a perfect square and <u>does</u> have perfect square factor(s) greater than 1, then the expression is <u>not</u> in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of square roots. Consider this example.

$$\sqrt{36} = \sqrt{4 \cdot 9} = \sqrt{4} \cdot \sqrt{9}$$

In general, if <u>a</u> and <u>b</u> represent whole numbers, then $\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}$.

Notice that this property is written so that it can be used to <u>factor</u> a square root expression.

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root **Cube Root**

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} \, .$$

Cube Root

We will consider problems in which the radicand is a whole number.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

Cube Root

We will consider problems in which the radicand is a whole number. If the radicand is not a perfect cube

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

Cube Root

We will consider problems in which the radicand is a whole number. If the radicand is not a perfect cube and does not have any perfect cube factors greater than 1,

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} .$$

Cube Root

We will consider problems in which the radicand is a whole number. If the radicand is not a perfect cube and does not have any perfect cube factors greater than 1, then the expression is said to be in 'standard radical form'.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} .$$

Cube Root

We will consider problems in which the radicand is a whole number. If the radicand is not a perfect cube and does not have any perfect cube factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

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$$\sqrt[3]{5}$$

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

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Cube Root

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$\sqrt[3]{5}$ $\sqrt[3]{6}$

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

Cube Root

We will consider problems in which the radicand is a whole number. If the radicand is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in <u>standard radical form</u>.

$$\sqrt[3]{5} \qquad \sqrt[3]{6} \qquad 3\sqrt[3]{10}$$

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

Cube Root

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$$\sqrt[3]{5} \qquad \sqrt[3]{6} \qquad 3\sqrt[3]{10} \qquad 2\sqrt[3]{3}$$

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

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Cube Root

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$$\sqrt[3]{5} \qquad \sqrt[3]{6} \qquad 3\sqrt[3]{10} \qquad 2\sqrt[3]{3} \qquad \sqrt[3]{15}$$

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

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$$\sqrt[3]{5} \qquad \sqrt[3]{6} \qquad 3\sqrt[3]{10} \qquad 2\sqrt[3]{3} \qquad \sqrt[3]{15}$$

In each case,

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

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$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

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$$\sqrt[3]{5} \qquad \sqrt[3]{6} \qquad 3\sqrt[3]{10} \qquad 2\sqrt[3]{3} \qquad \sqrt[3]{15}$$

In each case, the <u>radicand</u>

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} .$$

Cube Root

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In each case, the radicand

Square Root and Cube Root

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$$\sqrt[3]{5} \qquad \sqrt[3]{6} \qquad 3\sqrt[3]{10} \qquad 2\sqrt[3]{3} \qquad \sqrt[3]{15}$$

In each case, the radicand is a whole number

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

Cube Root

We will consider problems in which the radicand is a whole number. If the radicand is not a perfect cube and does not have any perfect cube factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in standard radical form.

$$\sqrt[3]{5} \qquad \sqrt[3]{6} \qquad 3\sqrt[3]{10} \qquad 2\sqrt[3]{3} \qquad \sqrt[3]{15}$$

In each case, the radicand is a whole number that is not a perfect cube

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

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Cube Root

We will consider problems in which the radicand is a whole number. If the radicand is not a perfect cube and does not have any perfect cube factors greater than 1, then the expression is said to be in 'standard radical form'. These expressions are in standard radical form.

$\sqrt[3]{5}$ $\sqrt[3]{6}$ $3\sqrt[3]{10}$ $2\sqrt[3]{3}$ $\sqrt[3]{15}$

In each case, the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

Cube Root

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

Cube Root

If the radicand is not a perfect cube

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

Cube Root

If the radicand is <u>not</u> a perfect cube and <u>does</u> have perfect cube factor(s) greater than 1,

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

Cube Root

If the radicand is not a perfect cube and does have perfect cube factor(s) greater than 1, then the expression is not in 'standard radical form'.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} \,.$$

Cube Root

If the radicand is not a perfect cube and does have perfect cube factor(s) greater than 1, then the expression is not in 'standard radical form'. The process of writing the expression in standard radical form relies on the multiplication property of cube roots.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

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If a and b represent integers,

Square Root and Cube Root

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$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

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If a and b represent integers, then

$$\sqrt[3]{a \cdot b}$$

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

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Cube Root

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If a and b represent integers, then

$$\sqrt[3]{a \cdot b} =$$

Square Root and Cube Root

Standard Radical Form

Square Root

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If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a}$$

Square Root and Cube Root

Standard Radical Form

Square Root

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If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

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If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot$$

Square Root and Cube Root

Standard Radical Form

Square Root

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If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Square Root and Cube Root

Standard Radical Form

Square Root

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If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Notice that this property is written so that it can be used to factor a cube root expression.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II   Class Worksheet #1   Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

1. $\sqrt{25} =$ _____

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

2. $\sqrt[3]{27} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

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If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

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If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

2. $\sqrt[3]{27} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

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Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

1. $\sqrt{25} =$ _____

25 is a perfect square.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

2. $\sqrt[3]{27} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

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If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

1. $\sqrt{25} =$ _____

25 is a perfect square.

2. $\sqrt[3]{27} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

1. $\sqrt{25} = \underline{\ \ 5\ \ }$

25 is a perfect square.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

2. $\sqrt[3]{27} = \underline{\qquad}$

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

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If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

1. $\sqrt{25} =$ __5__

25 is a perfect square.

$25 = 5^2$

2. $\sqrt[3]{27} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

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If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

1. $\sqrt{25} =$ **5**

25 is a perfect square.

$25 = 5^2$

2. $\sqrt[3]{27} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

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If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

1. $\sqrt{25} =$ __5__

25 is a perfect square.

$25 = 5^2$

2. $\sqrt[3]{27} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

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If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

1. $\sqrt{25} =$ **5**

25 is a perfect square.

$25 = 5^2$

2. $\sqrt[3]{27} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

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If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

1. $\sqrt{25}$ = **5**

25 is a perfect square.

$25 = 5^2$

2. $\sqrt[3]{27}$ = _____

27 is a perfect cube.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

1. $\sqrt{25} =$ __5__

25 is a perfect square.

$25 = 5^2$

2. $\sqrt[3]{27} =$ _____

27 is a perfect cube.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

1. $\sqrt{25} =$ 5

25 is a perfect square.

$25 = 5^2$

2. $\sqrt[3]{27} =$ 3

27 is a perfect cube.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

1. $\sqrt{25} = \underline{\ 5\ }$

25 is a perfect square.

$25 = 5^2$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

2. $\sqrt[3]{27} = \underline{\ 3\ }$

27 is a perfect cube.

$27 = 3^3$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

1. $\sqrt{25} = \underline{\ 5\ }$

25 is a perfect square.

$25 = 5^2$

2. $\sqrt[3]{27} = \underline{\ 3\ }$

27 is a perfect cube.

$27 = 3^3$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\,.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

1. $\sqrt{25} =$ **5**

25 is a perfect square.

$25 = 5^2$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

2. $\sqrt[3]{27} =$ **3**

27 is a perfect cube.

$27 = 3^3$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II   Class Worksheet #1   Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

3. $\sqrt{144} =$ _____

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

4. $\sqrt[3]{-125} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

3. $\sqrt{144} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

4. $\sqrt[3]{-125} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

3. $\sqrt{144}$ = _____

144 is a perfect square.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

4. $\sqrt[3]{-125}$ = _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

3. $\sqrt{144} =$ _____

144 is a perfect square.

4. $\sqrt[3]{-125} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

3. $\sqrt{144} = \underline{\ 12\ }$

144 is a perfect square.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

4. $\sqrt[3]{-125} = \_\_\_\_\_$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

3. $\sqrt{144} = \underline{\ 12\ }$

144 is a perfect square.

$144 = 12^2$

4. $\sqrt[3]{-125} = \underline{\qquad}$

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

3. $\sqrt{144} =$ **12**

144 is a perfect square.

$144 = 12^2$

4. $\sqrt[3]{-125} =$ _____

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

3. $\sqrt{144}$ = **12**

144 is a perfect square.

$144 = 12^2$

4. $\sqrt[3]{-125}$ = _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

3. $\sqrt{144} =$ **12**

144 is a perfect square.

$144 = 12^2$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

4. $\sqrt[3]{-125} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

3. $\sqrt{144} =$ **12**

144 is a perfect square.

$144 = 12^2$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

4. $\sqrt[3]{-125} =$ _____

-125 is a perfect cube.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

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If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

3. $\sqrt{144} =$ **12**

144 is a perfect square.

$144 = 12^2$

4. $\sqrt[3]{-125} =$ _____

-125 is a perfect cube.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

3. $\sqrt{144}$ = __12__

144 is a perfect square.

$144 = 12^2$

4. $\sqrt[3]{-125}$ = __-5__

-125 is a perfect cube.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

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If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

3. $\sqrt{144} =$ __12__

144 is a perfect square.

$144 = 12^2$

4. $\sqrt[3]{-125} =$ __-5__

-125 is a perfect cube.

$-125 = (-5)^3$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

3. $\sqrt{144} =$ **12**

144 is a perfect square.

$144 = 12^2$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

4. $\sqrt[3]{-125} =$ **-5**

-125 is a perfect cube.

$-125 = (-5)^3$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

3. $\sqrt{144} =$ **12**

144 is a perfect square.

$144 = 12^2$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

4. $\sqrt[3]{-125} =$ **-5**

-125 is a perfect cube.

$-125 = (-5)^3$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} .$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b} .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} =$ _____

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

5. $\sqrt{50} =$ _____

50 is not a perfect square.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} =$ _____

50 is not a perfect square.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} =$ _____

Notice that the radicand has at least one perfect square factor greater than 1.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b} .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} =$ _____

$25 \cdot 2$

Notice that the radicand has at least one perfect square factor greater than 1.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} =$ _____

$\sqrt{25}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

5. $\sqrt{50} =$ _____

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

5. $\sqrt{50} =$ _____

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} .$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b} .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

5. $\sqrt{50} =$ _____

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

6. $\sqrt[3]{24} =$ _____

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

5. $\sqrt{50}$ = _____

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

6. $\sqrt[3]{24}$ = _____

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II   Class Worksheet #1   Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

5. $\sqrt{50} =$ 5 ____

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

6. $\sqrt[3]{24} =$ _____

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} .$$

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b} .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} = 5\sqrt{2}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

5. $\sqrt{50} = 5\sqrt{2}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

6. $\sqrt[3]{24} =$ _____

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

6. $\sqrt[3]{24} = \_\_\_\_\_$

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} = \_\_\_\_\_$

24 is not a perfect cube.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\,.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} = \_\_\_\_\_$

24 is not a perfect cube.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} = \_\_\_\_\_$

Notice that the radicand has at least one perfect cube factor greater than 1.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} = \boxed{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

$8 \cdot 3$

Notice that the radicand has at least one perfect cube factor greater than 1.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\,.$$

Algebra II   Class Worksheet #1   Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

6. $\sqrt[3]{24} =$ _____

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} = \underline{\qquad}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

6. $\sqrt[3]{24} = \_\_\_\_\_$

$\sqrt[3]{8}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} =$ _____

$\sqrt[3]{8} \cdot \sqrt[3]{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

6. $\sqrt[3]{24} = \_\_\_\_\_$

$\sqrt[3]{8} \cdot \sqrt[3]{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} = \underline{\qquad}$

$\sqrt[3]{8} \cdot \sqrt[3]{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

6. $\sqrt[3]{24} = $ _____

$\sqrt[3]{8} \cdot \sqrt[3]{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II   Class Worksheet #1   Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

5. $\sqrt{50} = \underline{5\sqrt{2}}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

6. $\sqrt[3]{24} = \underline{2\quad\quad}$

$\sqrt[3]{8} \cdot \sqrt[3]{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} = 5\sqrt{2}$

$\sqrt{25} \cdot \sqrt{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

6. $\sqrt[3]{24} = 2\sqrt[3]{3}$

$\sqrt[3]{8} \cdot \sqrt[3]{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

5. $\sqrt{50} = \boxed{5\sqrt{2}}$

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If a and b represent whole numbers, then

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If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

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6. $\sqrt[3]{24} = 2\sqrt[3]{3}$

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Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

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If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

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Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

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Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

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If a and b represent whole numbers, then

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If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

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If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II   Class Worksheet #1   Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

7. $\sqrt{12} =$ _____

12 is not a perfect square.

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

8. $\sqrt[3]{-54} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

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$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} =$ _____

12 is not a perfect square.

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

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8. $\sqrt[3]{-54} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

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Algebra II Class Worksheet #1 Unit 5

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If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

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Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

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Algebra II Class Worksheet #1 Unit 5

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8. $\sqrt[3]{-54} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

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If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12}$ = _____

$\sqrt{4}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54}$ = ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} =$ ______

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} =$ _____

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

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If a and b represent integers, then

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Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} =$ _____

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II   Class Worksheet #1   Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

7. $\sqrt{12}$ = _____

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

8. $\sqrt[3]{-54}$ = ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

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Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} = $ 2____

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} = $ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

7. $\sqrt{12} = \underline{2\sqrt{3}}$

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

8. $\sqrt[3]{-54} = \_\_\_\_\_\_$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

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Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} = 2\sqrt{3}$

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

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If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

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Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

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Algebra II Class Worksheet #1 Unit 5

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Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

8. $\sqrt[3]{-54} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

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Algebra II Class Worksheet #1 Unit 5

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7. $\sqrt{12} = \underline{2\sqrt{3}}$

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If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} =$ ______

-54 is not a perfect cube.

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Algebra II   Class Worksheet #1   Unit 5

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7. $\sqrt{12} = 2\sqrt{3}$

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8. $\sqrt[3]{-54} = -3$ ____

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$\sqrt[3]{-27} \cdot \sqrt[3]{2}$

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What if we factored out $\sqrt[3]{27}$?

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Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then $\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}$.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} = -3\sqrt[3]{2}$

$\sqrt[3]{-27} \cdot \sqrt[3]{2}$

What if we factored out $\sqrt[3]{27}$ **?**

$\sqrt[3]{-54} = \sqrt[3]{27} \cdot \sqrt[3]{-2} = 3\sqrt[3]{-2}$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then $\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}$.

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} = 2\sqrt{3}$

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} = -3\sqrt[3]{2}$

$\sqrt[3]{-27} \cdot \sqrt[3]{2}$

What if we factored out $\sqrt[3]{27}$?

$$\sqrt[3]{-54} = \sqrt[3]{27} \cdot \sqrt[3]{-2} = 3\sqrt[3]{-2}$$

Although this answer is equivalent to the correct answer,

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} = \underline{2\sqrt{3}}$

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} = \underline{-3\sqrt[3]{2}}$

$\sqrt[3]{-27} \cdot \sqrt[3]{2}$

What if we factored out $\sqrt[3]{27}$?

$$\sqrt[3]{-54} = \sqrt[3]{27} \cdot \sqrt[3]{-2} = \underline{3\sqrt[3]{-2}}$$

Although this answer is equivalent to the correct answer, it is not in standard radical form.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} = 2\sqrt{3}$

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} = -3\sqrt[3]{2}$

$\sqrt[3]{-27} \cdot \sqrt[3]{2}$

What if we factored out $\sqrt[3]{27}$?

$\sqrt[3]{-54} = \sqrt[3]{27} \cdot \sqrt[3]{-2} = 3\sqrt[3]{-2}$

Although this answer is equivalent to the correct answer, it is not in standard radical form. The radicand,

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} = 2\sqrt{3}$

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} = -3\sqrt[3]{2}$

$\sqrt[3]{-27} \cdot \sqrt[3]{2}$

What if we factored out $\sqrt[3]{27}$?

$$\sqrt[3]{-54} = \sqrt[3]{27} \cdot \sqrt[3]{-2} = 3\sqrt[3]{-2}$$

Although this answer is equivalent to the correct answer, it is not in standard radical form. The radicand, -2,

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} = 2\sqrt{3}$

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} = -3\sqrt[3]{2}$

$\sqrt[3]{-27} \cdot \sqrt[3]{2}$

What if we factored out $\sqrt[3]{27}$?

$$\sqrt[3]{-54} = \sqrt[3]{27} \cdot \sqrt[3]{-2} = 3\sqrt[3]{-2}$$

Although this answer is equivalent to the correct answer, it is not in standard radical form. The radicand, -2, is not a whole number.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

7. $\sqrt{12} = \boxed{2\sqrt{3}}$

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

8. $\sqrt[3]{-54} = \boxed{-3\sqrt[3]{2}}$

$\sqrt[3]{-27} \cdot \sqrt[3]{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

7. $\sqrt{12} = 2\sqrt{3}$

$\sqrt{4} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

8. $\sqrt[3]{-54} = -3\sqrt[3]{2}$

$\sqrt[3]{-27} \cdot \sqrt[3]{2}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\,.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \_\_\_\_\_$

48 is not a perfect square.

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} = \_\_\_\_\_$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

9. $\sqrt{48} =$ _____

48 is not a perfect square.

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} =$ _____

$\sqrt{16}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} =$ _____

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} =$ _____

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} =$ _____

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} =$ _____

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} =$ 4____

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

10. $\sqrt[3]{32} = \underline{\qquad}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

10. $\sqrt[3]{32} = \underline{\qquad}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

10. $\sqrt[3]{32} = \_\_\_\_\_$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} = \_\_\_\_\_$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} =$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4}$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12}$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} =$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12}$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = \underline{2\sqrt{12}}$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = \underline{2\sqrt{12}}$

Although this is equivalent to the correct answer,

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = \underline{2\sqrt{12}}$

Although this is equivalent to the correct answer, it is not in standard radical form.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = \underline{2\sqrt{12}}$

Although this is equivalent to the correct answer, it is not in standard radical form. The radicand,

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = \underline{2\sqrt{12}}$

Although this is equivalent to the correct answer, it is not in standard radical form. The radicand, 12,

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\,.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = \underline{2\sqrt{12}}$

Although this is equivalent to the correct answer, it is not in standard radical form. The radicand, 12, has a perfect square factor greater than 1.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} = \_\_\_\_\_$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b} .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$

$=$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

10. $\sqrt[3]{32} = \_\_\_\_\_$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\,.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$

$= 2$

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$

$= 2$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

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Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = 4\sqrt{3}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$

$= 2 \cdot \sqrt{4}$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$

$= 2 \cdot \sqrt{4} \cdot \sqrt{3}$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$

$= 2 \cdot \sqrt{4} \cdot \sqrt{3} =$

$=$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\,.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$

$= 2 \cdot \sqrt{4} \cdot \sqrt{3} =$

$= 2$

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$

$= 2 \cdot \sqrt{4} \cdot \sqrt{3} =$

$= 2 \cdot 2$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then $\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}$.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then $\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}$.

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$$

$$= 2 \cdot \sqrt{4} \cdot \sqrt{3} =$$

$$= 2 \cdot 2 \cdot \sqrt{3}$$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

10. $\sqrt[3]{32} = \_\_\_\_\_$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$$

$$= 2 \cdot \sqrt{4} \cdot \sqrt{3} =$$

$$= 2 \cdot 2 \cdot \sqrt{3} =$$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$$

$$= 2 \cdot \sqrt{4} \cdot \sqrt{3} =$$

$$= 2 \cdot 2 \cdot \sqrt{3} = 4$$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$$
$$= 2 \cdot \sqrt{4} \cdot \sqrt{3} =$$
$$= 2 \cdot 2 \cdot \sqrt{3} = 4\sqrt{3}$$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$$
$$= 2 \cdot \sqrt{4} \cdot \sqrt{3} =$$
$$= 2 \cdot 2 \cdot \sqrt{3} = 4\sqrt{3}$$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$

$= 2 \cdot \sqrt{4} \cdot \sqrt{3} =$

$= 2 \cdot 2 \cdot \sqrt{3} = 4\sqrt{3}$

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \boxed{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

48 has two perfect square factors greater than 1. They are 4 and 16. It is important to factor out the largest perfect square factor. Let's see why.

$\sqrt{48} = \sqrt{4} \cdot \sqrt{12} = 2\sqrt{12} =$

$= 2 \cdot \sqrt{4} \cdot \sqrt{3} =$

$= 2 \cdot 2 \cdot \sqrt{3} = 4\sqrt{3}$

It saves time !!

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II   Class Worksheet #1   Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the <u>largest</u> perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

10. $\sqrt[3]{32} = \underline{\qquad}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the <u>largest</u> perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II   Class Worksheet #1   Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\,.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} = \_\_\_\_\_$

32 is not a perfect cube.

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

32 is not a perfect cube.

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\,.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\ .$$

10. $\sqrt[3]{32} = \_\_\_\_\_$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\ .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} = \_\_\_\_\_$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the <u>largest</u> perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

10. $\sqrt[3]{32} = \_\_\_\_\_$

$\sqrt[3]{8}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} = \underline{\qquad}$

$\sqrt[3]{8} \cdot \sqrt[3]{4}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} =$ _____

$\sqrt[3]{8} \cdot \sqrt[3]{4}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} \text{ .}$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} = \underline{\qquad}$

$\sqrt[3]{8} \cdot \sqrt[3]{4}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b} \text{ .}$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = 4\sqrt{3}$

$\sqrt{16} \cdot \sqrt{3}$

10. $\sqrt[3]{32} =$ ______

$\sqrt[3]{8} \cdot \sqrt[3]{4}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

9. $\sqrt{48} = 4\sqrt{3}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

10. $\sqrt[3]{32} = 2$ ____

$\sqrt[3]{8} \cdot \sqrt[3]{4}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = 4\sqrt{3}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} = 2\sqrt[3]{4}$

$\sqrt[3]{8} \cdot \sqrt[3]{4}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b} .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the <u>largest</u> perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b} .$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

10. $\sqrt[3]{32} = \underline{2\sqrt[3]{4}}$

$\sqrt[3]{8} \cdot \sqrt[3]{4}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b} .$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

9. $\sqrt{48} = \underline{4\sqrt{3}}$

$\sqrt{16} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

10. $\sqrt[3]{32} = \underline{2\sqrt[3]{4}}$

$\sqrt[3]{8} \cdot \sqrt[3]{4}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

11. $\sqrt{108} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using <u>standard radical form</u>.

11. $\sqrt{108} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the <u>largest</u> perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

12. $\sqrt[3]{-80} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

11. $\sqrt{108} =$ ______

108 is not a perfect square.

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

11. $\sqrt{108} =$ ______

108 is not a perfect square.

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

11. $\sqrt{108} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

11. $\sqrt{108} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

11. $\sqrt{108} =$ ______

$\sqrt{36}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}\,.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}\,.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

11. $\sqrt{108} =$ ______

$\sqrt{36} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

11. $\sqrt{108} =$ ______

$\sqrt{36} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

11. $\sqrt{108} =$ ______

$\sqrt{36} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

12. $\sqrt[3]{-80} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

11. $\sqrt{108} =$ ______

$\sqrt{36} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} =$ ______

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

Algebra II Class Worksheet #1 Unit 5

Express each of the following radicals in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.

11. $\sqrt{108} = \underline{\ 6\ \ \ \ \ }$

$\sqrt{36} \cdot \sqrt{3}$

Step 1: Use the multiplication property to factor the expression. Factor out the largest perfect square factor.

Step 2: Evaluate the square root of the perfect square factor.

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}.$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} = \underline{\ \ \ \ \ \ \ \ }$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

If a and b represent integers, then

$$\sqrt[3]{a \cdot b} = \sqrt[3]{a} \cdot \sqrt[3]{b}.$$

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If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

If a and b represent whole numbers, then

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If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} =$ ______

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Step 1: Use the multiplication property to factor the expression. Factor out the <u>largest</u> perfect square factor.

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If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

If <u>a</u> and <u>b</u> represent whole numbers, then

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If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} = \_\_\_\_\_\_$

-80 is not a perfect cube.

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

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12. $\sqrt[3]{-80} =$ ______

-80 is not a perfect cube.

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12. $\sqrt[3]{-80} =$ ______

$\sqrt[3]{-8}$

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Step 2: Evaluate the cube root of the perfect cube factor.

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If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.

12. $\sqrt[3]{-80} = \underline{\hspace{2cm}}$

$\sqrt[3]{-8} \cdot \sqrt[3]{10}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

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If <u>a</u> and <u>b</u> represent whole numbers, then

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If <u>a</u> and <u>b</u> represent whole numbers, then

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If the radicand is a perfect cube, give the exact value. If not, express the cube root using <u>standard radical form</u>.

12. $\sqrt[3]{-80} = \underline{-2\qquad}$

$\sqrt[3]{-8} \cdot \sqrt[3]{10}$

Step 1: Use the multiplication property to factor the expression. Factor out the perfect cube factor.

Step 2: Evaluate the cube root of the perfect cube factor.

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

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12. $\sqrt[3]{-80} = -2\sqrt[3]{10}$

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Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

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Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

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13. $\sqrt{12} + \sqrt{27} =$ ______

$=$

Step 1: Express each square root in standard radical form.

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If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$=$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4}$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3}$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3}$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} +$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} +$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9}$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3}$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3}$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$=$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$=$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3}$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3}$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} +$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

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Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3}$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3}$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} =$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} =$

Step 1: Express each square root in standard radical form.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} =$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} =$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} =$

2x

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} =$

$2x \quad +$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} =$

$2x \quad +$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} =$

$2x + 3x$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} =$

$2x + 3x =$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} =$

$2x + 3x = 5x$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} =$ ______

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

$2x + 3x = 5x$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

$2x + 3x = 5x$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the **radicand** is a **whole number** that is **not** a perfect square and does **not** have any perfect square factors greater than 1, then the square root is in **standard radical form**.

Cube Root

If the **radicand** is a **whole number** that is **not** a perfect cube and does **not** have any perfect cube factors greater than 1, then the cube root is in **standard radical form**.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$=$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$=$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$= \sqrt[3]{125}$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$= \sqrt[3]{125} \cdot \sqrt[3]{3}$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$= \sqrt[3]{125} \cdot \sqrt[3]{3}$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = 5\sqrt{3}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$= \sqrt[3]{125} \cdot \sqrt[3]{3} +$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$= \sqrt[3]{125} \cdot \sqrt[3]{3} +$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the **radicand** is a **whole** **number** that is **not** a perfect square and does **not** have any perfect square factors greater than 1, then the square root is in **standard radical form**.

Cube Root

If the **radicand** is a **whole** **number** that is **not** a perfect cube and does **not** have any perfect cube factors greater than 1, then the cube root is in **standard radical form**.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8}$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \underline{\qquad}$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3}$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the **radicand** is a **whole number** that is **not** a perfect square and does **not** have any perfect square factors greater than 1, then the square root is in **standard radical form**.

Cube Root

If the **radicand** is a **whole number** that is **not** a perfect cube and does **not** have any perfect cube factors greater than 1, then the cube root is in **standard radical form**.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \_\_\_\_\_\_$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3}$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \_\_\_\_\_\_$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$=$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \underline{\qquad}$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$=$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \_\_\_\_\_\_$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \underline{\qquad}$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3}$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} +$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} +$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

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Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} =$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \_\_\_\_\_\_$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} =$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \_\_\_\_\_\_$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} =$

Step 1: Express each cube root in standard radical form.

Square Root and Cube Root

Standard Radical Form

Square Root

If the **radicand** is a **whole number** that is **not** a perfect square and does **not** have any perfect square factors greater than 1, then the square root is in **standard radical form**.

Cube Root

If the **radicand** is a **whole number** that is **not** a perfect cube and does **not** have any perfect cube factors greater than 1, then the cube root is in **standard radical form**.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} =$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \_\_\_\_\_\_$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} =$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} =$ ______

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} =$

$5x$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \underline{\qquad}$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} =$

5x

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \_\_\_\_\_\_$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} =$

$5x + 2x$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \underline{\qquad}$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} =$

$5x + 2x = 7x$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \_\_\_\_\_\_$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} = 7\sqrt[3]{3}$

$5x + 2x = 7x$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \underline{7\sqrt[3]{3}}$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} = 7\sqrt[3]{3}$

$5x + 2x = 7x$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \underline{7\sqrt[3]{3}}$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} = 7\sqrt[3]{3}$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

13. $\sqrt{12} + \sqrt{27} = \underline{5\sqrt{3}}$

$= \sqrt{4} \cdot \sqrt{3} + \sqrt{9} \cdot \sqrt{3} =$

$= 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

14. $\sqrt[3]{375} + \sqrt[3]{24} = \underline{7\sqrt[3]{3}}$

$= \sqrt[3]{125} \cdot \sqrt[3]{3} + \sqrt[3]{8} \cdot \sqrt[3]{3} =$

$= 5\sqrt[3]{3} + 2\sqrt[3]{3} = 7\sqrt[3]{3}$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

=

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

$=$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

$= \sqrt{100}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

$= \sqrt{100} \cdot \sqrt{2}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

$= \sqrt{100} \cdot \sqrt{2} -$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

$= \sqrt{100} \cdot \sqrt{2} -$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

$= \sqrt{100} \cdot \sqrt{2} - \sqrt{16}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

$= \sqrt{100} \cdot \sqrt{2} - \sqrt{16} \cdot \sqrt{2}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

$= \sqrt{100} \cdot \sqrt{2} - \sqrt{16} \cdot \sqrt{2}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

$= \sqrt{100} \cdot \sqrt{2} - \sqrt{16} \cdot \sqrt{2} =$

$=$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

$= \sqrt{100} \cdot \sqrt{2} - \sqrt{16} \cdot \sqrt{2} =$

$=$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

$= \sqrt{100} \cdot \sqrt{2} - \sqrt{16} \cdot \sqrt{2} =$

$= 10$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} =$ ______

$= \sqrt{100} \cdot \sqrt{2} - \sqrt{16} \cdot \sqrt{2} =$

$= 10\sqrt{2}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

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15. $\sqrt{200} - \sqrt{32} =$ ______

$= \sqrt{100} \cdot \sqrt{2} - \sqrt{16} \cdot \sqrt{2} =$

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Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

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Algebra II Class Worksheet #1 Unit 5

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Algebra II   Class Worksheet #1   Unit 5

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Square Root and Cube Root

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Algebra II Class Worksheet #1 Unit 5

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Algebra II   Class Worksheet #1   Unit 5

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Square Root and Cube Root

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$= 10\sqrt{2} - 4\sqrt{2} =$

10x

Step 1: Express each square root in standard radical form.

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Square Root and Cube Root

Standard Radical Form

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$10x - 4x$

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Algebra II   Class Worksheet #1   Unit 5

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Square Root and Cube Root

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Algebra II   Class Worksheet #1   Unit 5

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$= \sqrt[3]{27}$

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Square Root and Cube Root

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Square Root and Cube Root

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Square Root and Cube Root

Standard Radical Form

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$= \sqrt{100} \cdot \sqrt{2} - \sqrt{16} \cdot \sqrt{2} =$

$= 10\sqrt{2} - 4\sqrt{2} = 6\sqrt{2}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} = \_\_\_\_\_\_$

$= \sqrt[3]{27} \cdot \sqrt[3]{2} - \sqrt[3]{8} \cdot \sqrt[3]{2}$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} = \underline{6\sqrt{2}}$

$= \sqrt{100} \cdot \sqrt{2} - \sqrt{16} \cdot \sqrt{2} =$

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Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} = \underline{6\sqrt{2}}$

$= \sqrt{100} \cdot \sqrt{2} - \sqrt{16} \cdot \sqrt{2} =$

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16. $\sqrt[3]{54} - \sqrt[3]{16} = \_\_\_\_\_\_$

$= \sqrt[3]{27} \cdot \sqrt[3]{2} - \sqrt[3]{8} \cdot \sqrt[3]{2} =$

$=$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} = \underline{6\sqrt{2}}$

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Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

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$=$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the __radicand__ is a __whole__ __number__ that is __not__ a perfect square and does __not__ have any perfect square factors greater than 1, then the square root is in __standard radical form__.

Cube Root

If the __radicand__ is a __whole__ __number__ that is __not__ a perfect cube and does __not__ have any perfect cube factors greater than 1, then the cube root is in __standard radical form__.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

15. $\sqrt{200} - \sqrt{32} = \underline{6\sqrt{2}}$

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$= 10\sqrt{2} - 4\sqrt{2} = 6\sqrt{2}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} =$ ______

$= \sqrt[3]{27} \cdot \sqrt[3]{2} - \sqrt[3]{8} \cdot \sqrt[3]{2} =$

$= 3$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

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$= 3\sqrt[3]{2}$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

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Algebra II   Class Worksheet #1   Unit 5

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$= 3\sqrt[3]{2} -$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

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Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

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$= 3\sqrt[3]{2} - 2$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II Class Worksheet #1 Unit 5

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Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the **radicand** is a **whole** **number** that is **not** a perfect square and does **not** have any perfect square factors greater than 1, then the square root is in **standard radical form**.

Cube Root

If the **radicand** is a **whole** **number** that is **not** a perfect cube and does **not** have any perfect cube factors greater than 1, then the cube root is in **standard radical form**.

Algebra II   Class Worksheet #1   Unit 5

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Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

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Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

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Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

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$= 3\sqrt[3]{2} - 2\sqrt[3]{2} =$

3x

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

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$= 3\sqrt[3]{2} - 2\sqrt[3]{2} =$

3x

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II   Class Worksheet #1   Unit 5

Perform the indicated operations. Express your answers in simplest form.

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$= 3\sqrt[3]{2} - 2\sqrt[3]{2} =$

$3x - 2x$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

Perform the indicated operations. Express your answers in simplest form.

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$3x - 2x = 1x$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the **radicand** is a **whole number** that is **not** a perfect square and does **not** have any perfect square factors greater than 1, then the square root is in **standard radical form**.

Cube Root

If the **radicand** is a **whole number** that is **not** a perfect cube and does **not** have any perfect cube factors greater than 1, then the cube root is in **standard radical form**.

Algebra II Class Worksheet #1 Unit 5

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$3x - 2x = x$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

Algebra II   Class Worksheet #1   Unit 5

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Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

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Square Root and Cube Root

Standard Radical Form

Square Root

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Step 2: Combine like terms.

Square Root and Cube Root

Standard Radical Form

Square Root

If the radicand is a whole number that is not a perfect square and does not have any perfect square factors greater than 1, then the square root is in standard radical form.

Cube Root

If the radicand is a whole number that is not a perfect cube and does not have any perfect cube factors greater than 1, then the cube root is in standard radical form.

Algebra II Class Worksheet #1 Unit 5

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Square Root and Cube Root

Standard Radical Form

Square Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect square and does <u>not</u> have any perfect square factors greater than 1, then the square root is in <u>standard radical form</u>.

Cube Root

If the <u>radicand</u> is a <u>whole</u> <u>number</u> that is <u>not</u> a perfect cube and does <u>not</u> have any perfect cube factors greater than 1, then the cube root is in <u>standard radical form</u>.

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Good luck on your homework !!

15. $\sqrt{200} - \sqrt{32} = \underline{6\sqrt{2}}$

$= \sqrt{100} \cdot \sqrt{2} - \sqrt{16} \cdot \sqrt{2} =$

$= 10\sqrt{2} - 4\sqrt{2} = 6\sqrt{2}$

Step 1: Express each square root in standard radical form.

Step 2: Combine like terms.

16. $\sqrt[3]{54} - \sqrt[3]{16} = \underline{\sqrt[3]{2}}$

$= \sqrt[3]{27} \cdot \sqrt[3]{2} - \sqrt[3]{8} \cdot \sqrt[3]{2} =$

$= 3\sqrt[3]{2} - 2\sqrt[3]{2} = \sqrt[3]{2}$

Step 1: Express each cube root in standard radical form.

Step 2: Combine like terms.