# Algebra II <br> Lesson \#2 Unit 5 <br> Class Worksheet \#2 <br> For Worksheet \#2 

Square Root and Cube Root of Fractions and Decimals

Square Root and Cube Root of Fractions and Decimals
Square Root
Consider the following problem.

## Square Root and Cube Root of Fractions and Decimals

Square Root
Consider the following problem.

$$
\sqrt{\frac{9}{16}}=\frac{3}{4}
$$

## Square Root and Cube Root of Fractions and Decimals

Square Root
Consider the following problem.

$$
\sqrt{\frac{9}{16}}=\frac{3}{4}, \text { since }\left(\frac{3}{4}\right)^{2}=\frac{9}{16}
$$

## Square Root and Cube Root of Fractions and Decimals

Square Root
Consider the following problem.

$$
\sqrt{\frac{9}{16}}=\frac{3}{4}, \text { since }\left(\frac{3}{4}\right)^{2}=\frac{9}{16}
$$

Note that $\sqrt{\frac{9}{16}}=\frac{\sqrt{9}}{\sqrt{16}}$

## Square Root and Cube Root of Fractions and Decimals

Square Root
Consider the following problem.

$$
\sqrt{\frac{9}{16}}=\frac{3}{4}, \text { since }\left(\frac{3}{4}\right)^{2}=\frac{9}{16}
$$

Note that $\sqrt{\frac{9}{16}}=\frac{\sqrt{9}}{\sqrt{16}}$
This illustrates an important property concerning the square root of a fraction.

## Square Root and Cube Root of Fractions and Decimals

Square Root
Consider the following problem.

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\sqrt{\frac{9}{16}}=\frac{3}{4}, \text { since }\left(\frac{3}{4}\right)^{2}=\frac{9}{16}
$$

Note that $\sqrt{\frac{9}{16}}=\frac{\sqrt{9}}{\sqrt{16}}$
This illustrates an important property concerning the square root of a fraction.

The Division Property of Square Roots

$$
\sqrt{\frac{a}{b}}=\frac{\sqrt{a}}{\sqrt{b}}
$$

Square Root and Cube Root of Fractions and Decimals
Square Root

The Division Property of Square Roots

$$
\sqrt{\frac{a}{b}}=\frac{\sqrt{a}}{\sqrt{b}}
$$

Square Root and Cube Root of Fractions and Decimals

The Division Property of Square Roots

$$
\sqrt{\frac{1}{2}}-\frac{\sqrt{1 / 2}}{\sqrt{10}}
$$

Square Root and Cube Root of Fractions and Decimals
Square Root
Cube Root
Consider the following problem.

The Division Property of Square Roots

$$
\sqrt{\frac{1}{2}}=\frac{\sqrt{10}}{\sqrt{6}}
$$

Square Root and Cube Root of Fractions and Decimals

Square Root
Cube Root
Consider the following problem.

$$
\sqrt[3]{\frac{27}{64}}=\frac{3}{4}
$$

The Division Property of Square Roots

$$
\sqrt{\frac{1}{5}}=\frac{1 \pi}{\sqrt{10}}
$$

Square Root and Cube Root of Fractions and Decimals

Square Root
Cube Root
Consider the following problem.

$$
\sqrt[3]{\frac{27}{64}}=\frac{3}{4}, \text { since }\left(\frac{3}{4}\right)^{3}=\frac{27}{64}
$$

The Division Property of Square Roots

$$
\sqrt{\frac{1}{2}-\sqrt{\frac{1}{1}}}
$$

## Square Root and Cube Root of Fractions and Decimals

Square Root
Cube Root
Consider the following problem.

$$
\begin{aligned}
& \sqrt[3]{\frac{27}{64}}=\frac{3}{4}, \text { since }\left(\frac{3}{4}\right)^{3}=\frac{27}{64} \\
& \text { Note that } \sqrt[3]{\frac{27}{64}}=\frac{\sqrt[3]{27}}{\sqrt[3]{64}}
\end{aligned}
$$

The Division Property of Square Roots

$$
\sqrt{\frac{a}{b}}=\frac{\sqrt{a}}{\sqrt{b}}
$$

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Cube Root
Consider the following problem.

$$
\begin{aligned}
& \sqrt[3]{\frac{27}{64}}=\frac{3}{4}, \text { since }\left(\frac{3}{4}\right)^{3}=\frac{27}{64} \\
& \text { Note that } \sqrt[3]{\frac{27}{64}}=\frac{\sqrt[3]{27}}{\sqrt[3]{64}}
\end{aligned}
$$

This illustrates an important property concerning the cube root of a fraction.

The Division Property of Square Roots

$$
\sqrt{\frac{a}{b}}=\frac{\sqrt{a}}{\sqrt{b}}
$$

## Square Root and Cube Root of Fractions and Decimals

Square Root
Cube Root
Consider the following problem.

$$
\begin{aligned}
& \sqrt[3]{\frac{27}{64}}=\frac{3}{4}, \text { since }\left(\frac{3}{4}\right)^{3}=\frac{27}{64} \\
& \text { Note that } \sqrt[3]{\frac{27}{64}}=\frac{\sqrt[3]{27}}{\sqrt[3]{64}}
\end{aligned}
$$

This illustrates an important property concerning the cube root of a fraction.

The Division Property of Cube Roots

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

The Division Property of Square Roots

$$
\sqrt{\frac{a}{b}}=\frac{\sqrt{a}}{\sqrt{b}}
$$

Square Root and Cube Root of Fractions and Decimals
Square Root
Cube Root

The Division Property of Square Roots

$$
\sqrt{\frac{\mathbf{a}}{\mathbf{b}}}=\frac{\sqrt{\mathbf{a}}}{\sqrt{b}}
$$

The Division Property of Cube Roots

$$
\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{a}}{\sqrt[3]{b}}
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## Algebra II Class Worksheet \#2 Unit 5

Express each of the following 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. $\sqrt{\frac{1}{4}}=$
2. $\sqrt{\frac{16}{49}}=$

The Division Property of Square Roots

$$
\sqrt{\frac{\mathbf{a}}{\mathbf{b}}}=\frac{\sqrt{\mathbf{a}}}{\sqrt{\mathbf{b}}}
$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
2. $\sqrt[3]{\frac{1}{27}}=$
4. $\sqrt[3]{\frac{-8}{27}}=$

The Division Property of Cube Roots

$$
\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{\mathbf{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.
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The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
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The Division Property of Square Roots

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\sqrt{\frac{\mathbf{a}}{b}}=\frac{\sqrt{\mathbf{a}}}{\sqrt{b}}
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The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
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\sqrt{\frac{a}{b}}=\frac{\sqrt{\mathbf{a}}}{\sqrt{b}}
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The Division Property of Cube Roots

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The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
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The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{\mathbf{b}}}
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$\frac{1}{27}$ is a perfect cube.
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The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{\mathbf{b}}}
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$\frac{16}{49}$ is a perfect square.

The Division Property of Square Roots

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\sqrt{\frac{\mathbf{a}}{\mathbf{b}}}=\frac{\sqrt{\mathbf{a}}}{\sqrt{\mathbf{b}}}
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$\frac{1}{27}$ is a perfect cube.
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The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
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The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
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The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{\mathbf{b}}}
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1. $\sqrt{\frac{1}{4}}=\frac{\sqrt{1}}{\sqrt{4}}=\frac{1}{2}$
$\frac{1}{4}$ is a perfect square.
2. $\sqrt{\frac{16}{49}}=\frac{\sqrt{16}}{\sqrt{49}}=\frac{4}{7}$
$\frac{16}{49}$ is a perfect square.

The Division Property of Square Roots

$$
\sqrt{\frac{a}{b}}=\frac{\sqrt{a}}{\sqrt{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.
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The Division Property of Cube Roots

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$\frac{1}{27}$ is a perfect cube.
4. $\sqrt[3]{\frac{-8}{27}}=\frac{\sqrt[3]{-8}}{\sqrt[3]{27}}$
$\frac{-8}{27}$ is a perfect cube.

The Division Property of Cube Roots

$$
\sqrt[3]{\frac{\mathbf{a}}{\mathbf{b}}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{\mathbf{b}}}
$$

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Express each of the following 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. $\sqrt{\frac{1}{4}}=\frac{\sqrt{1}}{\sqrt{4}}=\frac{1}{2}$
$\frac{1}{4}$ is a perfect square.
2. $\sqrt{\frac{16}{49}}=\frac{\sqrt{16}}{\sqrt{49}}=\frac{4}{7}$
$\frac{16}{49}$ is a perfect square.

The Division Property of Square Roots

$$
\sqrt{\frac{a}{b}}=\frac{\sqrt{\mathbf{a}}}{\sqrt{b}}
$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
2. $\sqrt[3]{\frac{1}{27}}=\frac{\sqrt[3]{1}}{\sqrt[3]{27}}=\frac{1}{3}$
$\frac{1}{27}$ is a perfect cube.
4. $\sqrt[3]{\frac{-8}{27}}=\frac{\sqrt[3]{-8}}{\sqrt[3]{27}}=\frac{-2}{3}$
$\frac{-8}{27}$ is a perfect cube.

The Division Property of Cube Roots

$$
\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
$$

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

## Express each of the following 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. $\sqrt{\frac{1}{4}}=\frac{\sqrt{1}}{\sqrt{4}}=\frac{1}{2}$
$\frac{1}{4}$ is a perfect square.
2. $\sqrt{\frac{16}{49}}=\frac{\sqrt{16}}{\sqrt{49}}=\frac{4}{7}$
$\frac{16}{49}$ is a perfect square.

The Division Property of Square Roots

$$
\sqrt{\frac{a}{b}}=\frac{\sqrt{a}}{\sqrt{b}}
$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
2. $\sqrt[3]{\frac{1}{27}}=\frac{\sqrt[3]{1}}{\sqrt[3]{27}}=\frac{1}{3}$
$\frac{1}{27}$ is a perfect cube.
4. $\sqrt[3]{\frac{-8}{27}}=\frac{\sqrt[3]{-8}}{\sqrt[3]{27}}=\frac{-2}{3}$
$\frac{-8}{27}$ is a perfect cube.

The Division Property of Cube Roots

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

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

## Express each of the following 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. $\sqrt{\frac{5}{9}}=$

The Division Property of Square Roots

$$
\sqrt{\frac{a}{b}}=\frac{\sqrt{\mathbf{a}}}{\sqrt{b}}
$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
6. $\sqrt[3]{\frac{7}{8}}=$

The Division Property of Cube Roots

$$
\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
$$

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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The Division Property of Square Roots

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\sqrt{\frac{\mathbf{a}}{\mathbf{b}}}=\frac{\sqrt{\mathbf{a}}}{\sqrt{\mathbf{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.
6. $\sqrt[3]{\frac{7}{8}}=$

The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Express each of the following 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. $\sqrt{\frac{5}{9}}=$
$\frac{5}{9}$ is not a perfect square.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
6. $\sqrt[3]{\frac{7}{8}}=$

The Division Property of Square Roots

$$
\sqrt{\frac{a}{b}}=\frac{\sqrt{a}}{\sqrt{b}}
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The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
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The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

## Express each of the following 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. $\sqrt{\frac{5}{9}}=$

Step 1: Express the fraction with an equivalent fraction whose denominator is a perfect square.

The Division Property of Square Roots

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\sqrt{\frac{\mathbf{a}}{\mathbf{b}}}=\frac{\sqrt{\mathbf{a}}}{\sqrt{\mathbf{b}}}
$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
6. $\sqrt[3]{\frac{7}{8}}=$

The Division Property of Cube Roots

$$
\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{\mathbf{b}}}
$$

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

## Express each of the following 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. $\sqrt{\frac{5}{9}}=$

The denominator is already a perfect square.

Step 1: Express the fraction with an equivalent fraction whose denominator is a perfect square.

The Division Property of Square Roots

$$
\sqrt{\frac{a}{b}}=\frac{\sqrt{a}}{\sqrt{b}}
$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
6. $\sqrt[3]{\frac{7}{8}}=$

The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
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## Square Root and Cube Root of Fractions and Decimals

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The Division Property of Square Roots

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The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{\mathbf{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.
5. $\sqrt{\frac{5}{9}}=$

Step 1: Express the fraction with an equivalent fraction whose denominator is a perfect square.
Step 2: Apply the division property of square roots to express the problem as a quotient of square roots.

The Division Property of Square Roots

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\sqrt{\frac{\mathbf{a}}{\mathbf{b}}}=\frac{\sqrt{\mathbf{a}}}{\sqrt{\mathbf{b}}}
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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{\mathbf{b}}}
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The Division Property of Cube Roots

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Step 2: Apply the division property of square roots to express the problem as a quotient of square roots.

Step 3: Evaluate the square root of the denominator.

The Division Property of Square Roots

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The Division Property of Cube Roots

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\begin{aligned}
& \text { 5. } \sqrt{\frac{5}{9}}= \\
& =\frac{\sqrt{5}}{\sqrt{9}}=\frac{\sqrt{5}}{3}=\frac{1}{3} \sqrt{5}
\end{aligned}
$$

Step 1: Express the fraction with an equivalent fraction whose denominator is a perfect square.

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The Division Property of Square Roots

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The Division Property of Cube Roots

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The Division Property of Square Roots

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\sqrt{\frac{a}{b}}=\frac{\sqrt{a}}{\sqrt{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.
6. $\sqrt[3]{\frac{7}{8}}=$
$\frac{7}{8}$ is not a perfect cube.

The Division Property of Cube Roots

$$
\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{a}}{\sqrt[3]{b}}
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## Square Root and Cube Root of Fractions and Decimals

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Step 4: Express the numerator in standard radical form.

The Division Property of Square Roots

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

> The denominator is already a perfect cube.

Step 1: Express the fraction with an equivalent fraction whose denominator is a perfect cube.

The Division Property of Cube Roots

$$
\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
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## Square Root and Cube Root of Fractions and Decimals

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The Division Property of Cube Roots

$$
\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{b}}
$$

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

## Express each of the following in simplest form.

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

$$
\begin{aligned}
& \text { 5. } \sqrt{\frac{5}{9}}= \\
& =\frac{\sqrt{5}}{\sqrt{9}}=\frac{\sqrt{5}}{3}=\frac{1}{3} \sqrt{5}
\end{aligned}
$$

Step 1: Express the fraction with an equivalent fraction whose denominator is a perfect square.

Step 2: Apply the division property of square roots to express the problem as a quotient of square roots.

Step 3: Evaluate the square root of the denominator.
Step 4: Express the numerator in standard radical form.

The Division Property of Square Roots

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\sqrt{\frac{\mathbf{a}}{b}}=\frac{\sqrt{\mathbf{a}}}{\sqrt{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.

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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.
6. $\sqrt[3]{\frac{7}{8}}=$

$$
=\frac{\sqrt[3]{7}}{\sqrt[3]{8}}
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$$
\begin{aligned}
& \text { 6. } \sqrt[3]{\frac{7}{8}}=\begin{array}{c}
\text { The numerator is already } \\
\text { in standard radical form. }
\end{array} \\
& =\frac{\sqrt[3]{7}}{\sqrt[3]{8}}=\frac{\sqrt[3]{7}}{2}
\end{aligned}
$$

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$$
\begin{aligned}
& \text { 6. } \begin{array}{l}
\sqrt[3]{\frac{7}{8}}= \\
=\frac{\sqrt[3]{7}}{\sqrt[3]{8}}=\frac{\sqrt[3]{7}}{2}=\frac{1}{2} \sqrt[3]{7}
\end{array} .=\text { Either answer i }
\end{aligned}
$$

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## Square Root and Cube Root of Fractions and Decimals

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$$
\text { 7. } \sqrt{\frac{2}{3}}=
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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. $\sqrt[3]{\frac{2}{3}}=$

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$\frac{2}{3}$ is not a perfect square.

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& \text { 7. } \sqrt{\frac{2}{3}}= \\
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\sqrt{\frac{\mathbf{a}}{\mathbf{b}}}=\frac{\sqrt{\mathbf{a}}}{\sqrt{\mathbf{b}}}
$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
8. $\sqrt[3]{\frac{2}{3}}=$

Step 1: Express the fraction with an equivalent fraction whose denominator is a perfect cube.

Step 2: Apply the division property of cube roots to express the problem as a quotient of cube roots.

Step 3: Evaluate the cube root of the denominator.
Step 4: Express the numerator in standard radical form.

The Division Property of Cube Roots

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\sqrt[3]{\frac{a}{b}}=\frac{\sqrt[3]{\mathbf{a}}}{\sqrt[3]{\mathbf{b}}}
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

## Express each of the following 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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\begin{aligned}
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## Algebra II Class Worksheet \#2 Unit 5

## Express each of the following in simplest form.

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

> The numerator is already in standard radical form.

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

$$
\text { 8. } \sqrt[3]{\frac{2}{3}}=
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Step 1: Express the fraction with an equivalent fraction whose denominator is a perfect square.
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8. $\sqrt[3]{\frac{2}{3}}=$

$$
\frac{2}{3} \text { is not a perfect cube. }
$$

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\begin{aligned}
& 8 . \quad \sqrt[3]{\frac{2}{3}}= \\
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

## Express each of the following in simplest form.

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

$$
\begin{aligned}
& \text { 7. } \sqrt{\frac{2}{3}}= \\
& =\sqrt{\frac{6}{9}}=\frac{\sqrt{6}}{\sqrt{9}}=\frac{\sqrt{6}}{3}=\frac{1}{3} \sqrt{6}
\end{aligned}
$$

Step 1: Express the fraction with an equivalent fraction whose denominator is a perfect square.

Step 2: Apply the division property of square roots to express the problem as a quotient of square roots.

Step 3: Evaluate the square root of the denominator.
Step 4: Express the numerator in standard radical form.

The Division Property of Square Roots

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\sqrt{\frac{a}{b}}=\frac{\sqrt{a}}{\sqrt{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.

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\begin{array}{r}
8 . \sqrt[3]{\frac{2}{3}}= \\
=\sqrt[3]{\frac{18}{27}}=\frac{\sqrt[3]{18}}{\sqrt[3]{27}}
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& \text { 8. } \quad \sqrt[3]{\frac{2}{3}}=\begin{array}{l}
\text { The numerator is already } \\
\text { in standard radical form. }
\end{array} \\
& =\sqrt[3]{\frac{18}{27}}=\frac{\sqrt[3]{18}}{\sqrt[3]{27}}=\frac{\sqrt[3]{18}}{3}
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$=\frac{\sqrt{90}}{10}$
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The Division Property of Square Roots

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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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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.
10. $\sqrt[3]{\frac{-8}{9}}=$ $\frac{-8}{9}$ is not a perfect cube.

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The Division Property of Cube Roots

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

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

## Express each of the following in simplest form.

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

$$
\begin{aligned}
& \text { 9. } \sqrt{\frac{9}{10}}=\sqrt{\frac{90}{100}}=\frac{\sqrt{90}}{\sqrt{100}}= \\
& =\frac{\sqrt{90}}{10}=\frac{\sqrt{9} \cdot \sqrt{10}}{10}=\frac{3 \sqrt{10}}{10}=\frac{3}{10} \sqrt{10}
\end{aligned}
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Step 1: Express the fraction with an equivalent fraction whose denominator is a perfect square.

Step 2: Apply the division property of square roots to express the problem as a quotient of square roots.

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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Express each of the following in simplest form.

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

$$
\text { 11. } \sqrt{0.36}=
$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
12. $\sqrt[7]{0.125}=$

## Square Root and Cube Root of Fractions and Decimals

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0.36 is a perfect square.

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Express each of the following in simplest form.

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

$$
\text { 11. } \sqrt{0.36}=0.6
$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
12. $\sqrt[2]{0.125}=$

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\text { 11. } \sqrt{0.36}=0.6
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0.6^{2}=0.36
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12. $\sqrt[3]{0.125}=$

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0.6^{2}=0.36
$$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
12. $\sqrt[7]{\mathbf{0 . 1 2 5}}=$
0.125 is a perfect cube.

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0.6^{2}=0.36
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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.

$$
\text { 12. } \sqrt[3]{0.125}=0.5
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$0.5^{3}=0.125$

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13. $\sqrt{1.5}=$

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
14. $\sqrt[2]{-1.6}=$

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Express each of the following in simplest form.

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

## 13. $\sqrt{1.5}=$

1.5 is not a perfect square.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
14. $\sqrt[3]{-1.6}=$

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Express each of the following in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.
13. $\sqrt{1.5}=$

Step 1: Express the decimal as a fraction in lowest terms.

If the radicand is a perfect cube, give the exact value. If not, express the cube root using standard radical form.
14. $\sqrt[3]{-1.6}=$

## Square Root and Cube Root of Fractions and Decimals

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Express each of the following in simplest form.

If the radicand is a perfect square, give the exact value. If not, express the square root using standard radical form.
13. $\sqrt{1.5}=\sqrt{\frac{3}{2}}$

Step 1: Express the decimal as a fraction in lowest terms.
14. $\sqrt[8]{-1.6}=$

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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Step 1: Express the decimal as a fraction in lowest terms.

Step 2: Express the fraction with an equivalent fraction whose denominator is a perfect square.
14. $\sqrt[8]{-1.6}=$

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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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& \text { 13. } \sqrt{1.5}=\sqrt{\frac{3}{2}}= \\
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14. $\sqrt[2]{-1.6}=$

## Square Root and Cube Root of Fractions and Decimals

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\text { The numerator is already } \\
\text { in standard radical form. }
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- 1.6 is not a perfect cube.


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14. $\sqrt[2]{-1.6}=\sqrt[3]{\frac{-8}{5}}=\sqrt[3]{\frac{-200}{125}}$

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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.
13. $\sqrt{1.5}=\sqrt{\frac{3}{2}}=$

$$
=\sqrt{\frac{6}{4}}=\frac{\sqrt{6}}{\sqrt{4}}=\frac{\sqrt{6}}{2}=\frac{1}{2} \sqrt{6}
$$

Step 1: Express the decimal as a fraction in lowest terms.

Step 2: Express the fraction with an equivalent fraction whose denominator is a perfect square.
Step 3: Apply the division property of square roots to express the problem as a quotient of square roots.
Step 4: Evaluate the square root of the denominator.
Step 5: Express the numerator in standard radical form.

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

$$
\begin{aligned}
& \text { 14. } \sqrt[3]{-1.6}=\sqrt[3]{\frac{-8}{5}}=\sqrt[3]{\frac{-200}{125}}=\frac{\sqrt[3]{-200}}{\sqrt[3]{125}}= \\
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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Algebra II Class Worksheet \#2 Unit 5
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15. $\sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=$
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$=\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}=$
$=\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}=$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}= \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =
\end{aligned}
$$

$$
\text { 16. } \sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}= \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{15}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
15. $\sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=$
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}=$
$=\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}=$

$$
=\overline{15}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}= \\
& \begin{aligned}
=\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
=\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{\sqrt{5}}{15}= \\
=\frac{8 \sqrt{5}}{15}
\end{aligned}
\end{aligned}
$$

$$
\text { 16. } \sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
15. $\sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15}$
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}=$
$=\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}=$

$$
=\frac{8 \sqrt{5}}{15}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

Step 1: Express each cube root in standard radical form.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=$

Step 1: Express each cube root in standard radical form.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
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16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}$

Step 1: Express each cube root in standard radical form.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+$

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## Square Root and Cube Root of Fractions and Decimals

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& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
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& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

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& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
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Step 1: Express each square root in standard radical form.
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$

$$
=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=
$$

Step 1: Express each cube root in standard radical form.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
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& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

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$$
=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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& =\frac{8 \sqrt{5}}{15}
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$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}$

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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

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& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+$

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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+$

Step 1: Express each cube root in standard radical form.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}$

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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
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16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}=$

Step 1: Express each cube root in standard radical form.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{array}{ll}
\text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
=\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= & \text { 16. } \sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}= \\
=\frac{\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}=}{15}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= & = \\
\begin{array}{ll}
\text { Step 1: Express each square root in }
\end{array} & \begin{array}{l}
\text { Step 1: Express each cube root in } \\
\text { standard radical form. }
\end{array}
\end{array}
$$

Step 1: Express each square root in standard radical form.

Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{array}{ll}
\text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
=\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= & \text { 16. } \sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}= \\
=\frac{\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}=}{}=\frac{8 \sqrt{5}}{15} & =\frac{\sqrt[3]{3}}{2} \\
=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= & \begin{array}{l}
\text { Step 1: Express each cube root in } \\
\text { standard radical form. }
\end{array}
\end{array}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{array}{ll}
\text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
=\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= & \text { 16. } \sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}= \\
=\frac{\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}=}{15}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= & =\frac{\sqrt[3]{3}}{2}+ \\
\begin{array}{ll}
\text { Step 1: Express each square root in } \\
\text { standard radical form. }
\end{array} & \begin{array}{l}
\text { Step 1: Express each cube root in } \\
\text { standard radical form. }
\end{array}
\end{array}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{array}{ll}
\text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
=\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= & \text { 16. } \sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}= \\
=\frac{\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}=}{}=\frac{8 \sqrt{5}}{15} & =\frac{\sqrt[3]{3}}{2}+ \\
\begin{array}{ll}
\text { Step 1: Express each square root in } & \frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
\text { standard radical form. }
\end{array} & \begin{array}{l}
\text { Step 1: Express each cube root in } \\
\text { standard radical form. }
\end{array}
\end{array}
$$

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\begin{aligned}
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& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}=$
$=\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}$

Step 1: Express each cube root in standard radical form.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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\end{aligned}
$$

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## Square Root and Cube Root of Fractions and Decimals

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& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
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& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}=$
$=\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}=$

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}=$
$=\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}=\frac{3 \sqrt[3]{3}}{6}$

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}=$
$=\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}=\frac{3 \sqrt[3]{3}}{6}+$

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
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16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}=$
$=\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}=\frac{3 \sqrt[3]{3}}{6}+$

Step 1: Express each cube root in standard radical form.
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

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\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}=$
$=\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}=\frac{3 \sqrt[3]{3}}{6}+\frac{2 \sqrt[3]{3}}{6}$

Step 1: Express each cube root in standard radical form.
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
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16. $\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=$
$=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}=$
$=\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}=\frac{3 \sqrt[3]{3}}{6}+\frac{2 \sqrt[3]{3}}{6}=$

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

$$
\begin{gathered}
\text { 16. } \sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}= \\
=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}= \\
=\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}=\frac{3 \sqrt[3]{3}}{6}+\frac{2 \sqrt[3]{3}}{6}= \\
=
\end{gathered}
$$

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

$$
\begin{gathered}
\text { 16. } \sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}= \\
=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}= \\
=\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}=\frac{3 \sqrt[3]{3}}{6}+\frac{2 \sqrt[3]{3}}{6}= \\
=\frac{6}{6}
\end{gathered}
$$

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

$$
\begin{gathered}
\text { 16. } \sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}= \\
=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}= \\
=\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}=\frac{3 \sqrt[3]{3}}{6}+\frac{2 \sqrt[3]{3}}{6}= \\
=\frac{\sqrt[3]{6}}{6}
\end{gathered}
$$

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

$$
\begin{gathered}
\text { 16. } \sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}= \\
=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}= \\
=\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}=\frac{3 \sqrt[3]{3}}{6}+\frac{2 \sqrt[3]{3}}{6}= \\
=\frac{5 \sqrt[3]{3}}{6}
\end{gathered}
$$

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} \\
& =\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= \\
& =\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= \\
& =\frac{8 \sqrt{5}}{15}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

$$
\begin{gathered}
\text { 16. } \sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=\frac{5 \sqrt[3]{3}}{6} \\
=\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}= \\
=\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}=\frac{3 \sqrt[3]{3}}{6}+\frac{2 \sqrt[3]{3}}{6}= \\
=\frac{5 \sqrt[3]{3}}{6}
\end{gathered}
$$

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{array}{cc}
\text { 15. } \sqrt{\frac{1}{5}}+\sqrt{\frac{5}{9}}=\frac{8 \sqrt{5}}{15} & \text { 16. } \sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{1}{9}}=\frac{5 \sqrt[3]{3}}{6} \\
=\sqrt{\frac{5}{25}}+\sqrt{\frac{5}{9}}=\frac{\sqrt{5}}{\sqrt{25}}+\frac{\sqrt{5}}{\sqrt{9}}= & =\sqrt[3]{\frac{3}{8}}+\sqrt[3]{\frac{3}{27}}=\frac{\sqrt[3]{3}}{\sqrt[3]{8}}+\frac{\sqrt[3]{3}}{\sqrt[3]{27}}= \\
=\frac{\sqrt{5}}{5}+\frac{\sqrt{5}}{3}=\frac{3 \sqrt{5}}{15}+\frac{5 \sqrt{5}}{15}= & =\frac{\sqrt[3]{3}}{2}+\frac{\sqrt[3]{3}}{3}=\frac{3 \sqrt[3]{3}}{6}+\frac{2 \sqrt[3]{3}}{6}= \\
=\frac{8 \sqrt{5}}{15} & =\frac{5 \sqrt[3]{3}}{6}
\end{array}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
$=$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
$=\sqrt{\frac{14}{16}}$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
$=\sqrt{\frac{14}{16}}-$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

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Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$
$=\sqrt{\frac{14}{16}}-$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$
$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$
$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=$

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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$

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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$

Step 1: Express each square root in standard radical form.
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Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$

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## Square Root and Cube Root of Fractions and Decimals

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Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$

Step 1: Express each square root in standard radical form.
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Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 17. } \sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}= \\
& =\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-\frac{\sqrt{14}}{\sqrt{49}}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$

Step 1: Express each cube root in standard radical form.
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
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$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-\frac{\sqrt{14}}{\sqrt{49}}=$

Step 1: Express each square root in standard radical form.
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$
$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-\frac{\sqrt{14}}{\sqrt{49}}=$
$=$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$
$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-\frac{\sqrt{14}}{\sqrt{49}}=$
$=\frac{\sqrt{14}}{4}$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$
$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-\frac{\sqrt{14}}{\sqrt{49}}=$
$=\frac{\sqrt{14}}{4}-$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$
$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-\frac{\sqrt{14}}{\sqrt{49}}=$
$=\frac{\sqrt{14}}{4}-$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$
$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-\frac{\sqrt{14}}{\sqrt{49}}=$
$=\frac{\sqrt{14}}{4}-\frac{\sqrt{14}}{7}$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 17. } \sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}= \\
& =\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-\frac{\sqrt{14}}{\sqrt{49}}= \\
& =\frac{\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=}{4}-\frac{\sqrt{14}}{7}
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.

Step 1: Express each cube root in standard radical form.
Step 2: Use a common denominator and combine like terms.

## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.
17. $\sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}=$
18. $\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=$
$=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-\frac{\sqrt{14}}{\sqrt{49}}=$
$=\frac{\sqrt{14}}{4}-\frac{\sqrt{14}}{7}=$

Step 1: Express each square root in standard radical form.
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

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& =\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-\frac{\sqrt{14}}{\sqrt{49}}= \\
& =\frac{\sqrt{14}}{4}-\frac{\sqrt{14}}{7}=\frac{7 \sqrt{14}}{28}-\frac{4 \sqrt{14}}{28}= \\
& =
\end{aligned}
$$

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## Algebra II Class Worksheet \#2 Unit 5

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& =\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-\frac{\sqrt{14}}{\sqrt{49}}= \\
& =\frac{\sqrt[3]{9}}{\frac{5}{9}}-\frac{\sqrt[3]{\frac{3}{25}}}{2}= \\
& =\frac{\sqrt{14}}{7}=\frac{7 \sqrt{14}}{28}-\frac{4 \sqrt{14}}{28}=
\end{aligned}
$$

Step 1: Express each square root in standard radical form.
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Step 1: Express each cube root in standard radical form.
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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

$$
\begin{gathered}
\text { 17. } \sqrt{\frac{7}{8}}-\sqrt{\frac{2}{7}}= \\
=\sqrt{\frac{14}{16}}-\sqrt{\frac{14}{49}}=\frac{\sqrt{14}}{\sqrt{16}}-\frac{\sqrt{14}}{\sqrt{49}}= \\
=\frac{\sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=}{\sqrt{14}}-\frac{\sqrt{14}}{7}=\frac{7 \sqrt{14}}{28}-\frac{4 \sqrt{14}}{28}= \\
=\frac{18}{28}
\end{gathered}
$$

Step 1: Express each square root in standard radical form.
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## Algebra II Class Worksheet \#2 Unit 5

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& =\frac{3 \sqrt{14}}{28}
\end{aligned}
$$

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& =\frac{\sqrt{14}}{4}-\frac{\sqrt{14}}{7}=\frac{7 \sqrt{14}}{28}-\frac{4 \sqrt{14}}{28}= \\
& =\frac{3 \sqrt{14}}{28}
\end{aligned}
$$

$$
\text { 18. } \sqrt[3]{\frac{5}{9}}-\sqrt[3]{\frac{3}{25}}=
$$

Step 1: Express each square root in standard radical form.
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Step 1: Express each square root in standard radical form.
Step 2: Use a common denominator and combine like terms.
$=\sqrt[3]{\frac{15}{27}}-\sqrt[3]{\frac{15}{125}}=\frac{\sqrt[3]{15}}{\sqrt[3]{27}}-\frac{\sqrt[3]{15}}{\sqrt[3]{125}}=$
$=\frac{\sqrt[3]{15}}{3}$

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## Square Root and Cube Root of Fractions and Decimals

## Algebra II Class Worksheet \#2 Unit 5

Perform the indicated operations. Express your answers in simplest form.

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