General Algebra II
Lesson #3 Unit 7
Class Worksheet #3
For Worksheet #3

Introduction to the Imaginary Numbers

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Children learn the meaning of addition, putting two groups of objects together, early on. That is followed, in an equally concrete way, with subtraction, 'take away'. This leads to the introduction of 'zero' and the set of whole numbers.

I am not sure how early students are taught about the integers, but the fact that the temperature can go below zero leads to the need for negative numbers.

Introduction to the Imaginary Numbers

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The meaning of, and the need for, the number zero can be reinforced with the equation '5 + __ = 5'. As the mathematics becomes more advanced, the equation becomes '5 + __ = 3', which leads the students to appreciate the need for negative integers.

Repeated addition leads to the concept of multiplication and to equations like 5 × __ = 20. Once again, as the mathematics advances, equations like 5 × __ = 3 leads to the concept of, and the notation used for, fractions.

Introduction to the Imaginary Numbers

Exponents are eventually introduced, leading to equations like $x^2 = 49$. However, when equations like $x^2 = 5$ are first encountered, students can only approximate the solution. The only way to represent the exact value of the irrational number solutions involves the use of the radical sign, a symbol that was created for that purpose.

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Now the mathematics has advanced to the point that we need to introduce a new type of number. A number that will be a solution of the equation $x^2 = -1$. Certainly, this number is not a real number. If k represents any real number, $k^2 \geq 0$!! The new number we need is i. Yes, the number i.

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i =

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Note: Electrical engineering students call this number j. They use the symbol 'i' for the measure of the current flowing in a circuit.

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Any number that can be expressed in the form bi where b is a real number and $i = \sqrt{-1}$ is an imaginary number.

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Here are several examples of imaginary numbers.

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$i\sqrt{3}$ $-2i\sqrt{2}$

The last two examples are sometimes written in another form to avoid any confusion. The vinculum, the horizontal bar, can not extend above the number i.

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The square root of a negative number is an imaginary number.

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The square root of a negative number is an imaginary number. Writing these numbers in simplest form will be considered next. Make sure that you understand that the cube root of a negative number is a (negative) real number.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

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Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

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Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} = \underline{\quad 3 \quad}$

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Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8**

$\sqrt{64} \cdot \sqrt{-1}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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$\sqrt{9} \cdot \sqrt{-1}$

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$\sqrt{64} \cdot \sqrt{-1}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ _____

4. $\sqrt{-24} =$ _____

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

4. $\sqrt{-24} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} = \sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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$\sqrt{9} \cdot \sqrt{-1}$

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$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

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$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

$\sqrt{24}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

$\sqrt{24} \cdot \sqrt{-1}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

$\sqrt{24} \cdot \sqrt{-1}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

$\sqrt{24} \cdot \sqrt{-1}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

$\sqrt{24} \cdot \sqrt{-1} =$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ _____

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} = 2$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} = 2$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} = \sqrt{2}\,i$

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

4. $\sqrt{-24} = 2\sqrt{6}$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} = 2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

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$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} =$ _____

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} =$ _____

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} =$ _____

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

   $\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

   $\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ **$\sqrt{2}\,i$**

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

4. $\sqrt{-24} =$ **$2\sqrt{6}\,i$**

   $\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} =$ _____

   $\sqrt{50}$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} =$ _____

$\sqrt{50} \cdot \sqrt{-1}$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

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2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} =$ _____

$\sqrt{50} \cdot \sqrt{-1}$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} =$ _____

$\sqrt{50} \cdot \sqrt{-1}$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} =$ _____

$\sqrt{50} \cdot \sqrt{-1} =$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} =$ _____

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25}$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} =$ _____

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

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$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} =$ _____

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} =$ _____

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

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$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} =$ _____

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} =$ _____

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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3. $\sqrt{-2} =$ $\sqrt{2}\,i$

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} =$ _____

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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General Algebra II Class Worksheet #3 Unit 7

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

4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} =$ **5**

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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General Algebra II Class Worksheet #3 Unit 7

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4. $\sqrt{-24} =$ $2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} =$ **5**

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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

4. $\sqrt{-24} =$ **$2\sqrt{6}\,i$**

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} =$ **$5\sqrt{2}$**

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\ i$

6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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6. $\sqrt{-54} =$ _____

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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

4. $\sqrt{-24} = 2\sqrt{6}\,i$

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

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$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} = 5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ _____

$\sqrt{54}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

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6. $\sqrt{-54} =$ _____

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Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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5. $\sqrt{-50} =$ $5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\ i$

6. $\sqrt{-54} =$ _____

$\sqrt{54} \cdot \sqrt{-1}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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5. $\sqrt{-50} =$ $5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ _____

$\sqrt{54} \cdot \sqrt{-1}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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5. $\sqrt{-50} =$ $5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ _____

$\sqrt{54} \cdot \sqrt{-1} =$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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5. $\sqrt{-50} =$ $5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ _____

$\sqrt{54} \cdot \sqrt{-1} = \sqrt{9}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

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$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} =$ $5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\ i$

6. $\sqrt{-54} =$ _____

$\sqrt{54} \cdot \sqrt{-1} = \sqrt{9} \cdot \sqrt{6}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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General Algebra II Class Worksheet #3 Unit 7

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$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} =$ $5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\ i$

6. $\sqrt{-54} =$ _____

$\sqrt{54} \cdot \sqrt{-1} = \sqrt{9} \cdot \sqrt{6}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} =$ $5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\ i$

6. $\sqrt{-54} =$ _____

$\sqrt{54} \cdot \sqrt{-1} = \sqrt{9} \cdot \sqrt{6}$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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5. $\sqrt{-50} =$ $5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ _____

$\sqrt{54} \cdot \sqrt{-1} = \sqrt{9} \cdot \sqrt{6}\,i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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5. $\sqrt{-50} =$ $5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ _____

$\sqrt{54} \cdot \sqrt{-1} = \sqrt{9} \cdot \sqrt{6}\,i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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5. $\sqrt{-50} =$ $5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ _____

$\sqrt{54} \cdot \sqrt{-1} = \sqrt{9} \cdot \sqrt{6}\,i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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General Algebra II Class Worksheet #3 Unit 7

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   $\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} =$ **$\sqrt{2}\,i$**

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

4. $\sqrt{-24} =$ **$2\sqrt{6}\,i$**

   $\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} =$ **$5\sqrt{2}\,i$**

   $\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\ i$

6. $\sqrt{-54} =$ **3**

   $\sqrt{54} \cdot \sqrt{-1} = \sqrt{9} \cdot \sqrt{6}\ i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

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$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} =$ $5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} =$ **3**

$\sqrt{54} \cdot \sqrt{-1} = \sqrt{9} \cdot \sqrt{6}\,i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} = \underline{\quad 3i \quad}$

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} = \underline{\quad 8i \quad}$

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} = \underline{\quad \sqrt{2}\,i \quad}$

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

4. $\sqrt{-24} = \underline{\quad 2\sqrt{6}\,i \quad}$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} = \underline{\quad 5\sqrt{2}\,i \quad}$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\ i$

6. $\sqrt{-54} = \underline{\quad 3\sqrt{6} \quad}$

$\sqrt{54} \cdot \sqrt{-1} = \sqrt{9} \cdot \sqrt{6}\ i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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

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$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} = 5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} = 3\sqrt{6}\,i$

$\sqrt{54} \cdot \sqrt{-1} = \sqrt{9} \cdot \sqrt{6}\,i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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

4. $\sqrt{-24} =$ **$2\sqrt{6}\,i$**

   $\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\ i$

5. $\sqrt{-50} =$ **$5\sqrt{2}\,i$**

   $\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\ i$

6. $\sqrt{-54} =$ **$3\sqrt{6}\,i$**

   $\sqrt{54} \cdot \sqrt{-1} = \sqrt{9} \cdot \sqrt{6}\ i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following as imaginary numbers in bi form. (Simplify any square roots.)

1. $\sqrt{-9} =$ **3i**

$\sqrt{9} \cdot \sqrt{-1}$

2. $\sqrt{-64} =$ **8i**

$\sqrt{64} \cdot \sqrt{-1}$

3. $\sqrt{-2} = \sqrt{2}\,i$

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

4. $\sqrt{-24} = 2\sqrt{6}\,i$

$\sqrt{24} \cdot \sqrt{-1} = \sqrt{4} \cdot \sqrt{6}\,i$

5. $\sqrt{-50} = 5\sqrt{2}\,i$

$\sqrt{50} \cdot \sqrt{-1} = \sqrt{25} \cdot \sqrt{2}\,i$

6. $\sqrt{-54} = 3\sqrt{6}\,i$

$\sqrt{54} \cdot \sqrt{-1} = \sqrt{9} \cdot \sqrt{6}\,i$

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

8. $\sqrt[3]{-72} =$ _____

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

8. $\sqrt[3]{-72} =$ _____

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

$\sqrt{72}$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

$\sqrt{72} \cdot \sqrt{-1}$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

$\sqrt{72} \cdot \sqrt{-1} =$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

$\sqrt{72} \cdot \sqrt{-1} =$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

$\sqrt{72} \cdot \sqrt{-1} =$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36}$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\ i$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\ i$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} =$ _____

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\ i$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} = 6$

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\ i$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} = 6\sqrt{2}\,i$

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\,i$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} = \underline{6\sqrt{2}\,i}$

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\ i$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} = 6\sqrt{2}\,i$

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\,i$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} = 6\sqrt{2}\,i$

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\ i$

8. $\sqrt[3]{-72} =$ _____

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} = 6\sqrt{2}\,i$

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\,i$

8. $\sqrt[3]{-72} =$ _____

$\sqrt[3]{-8}$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} = 6\sqrt{2}\,i$

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\,i$

8. $\sqrt[3]{-72} =$ _____

$\sqrt[3]{-8} \cdot \sqrt[3]{9}$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} = 6\sqrt{2}\,i$

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\,i$

8. $\sqrt[3]{-72} = -2$

$\sqrt[3]{-8} \cdot \sqrt[3]{9}$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} = 6\sqrt{2}\,i$

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\,i$

8. $\sqrt[3]{-72} = -2\sqrt[3]{9}$

$\sqrt[3]{-8} \cdot \sqrt[3]{9}$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} = 6\sqrt{2}\,i$

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\,i$

8. $\sqrt[3]{-72} = -2\sqrt[3]{9}$

$\sqrt[3]{-8} \cdot \sqrt[3]{9}$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

7. $\sqrt{-72} = 6\sqrt{2}\,i$

$\sqrt{72} \cdot \sqrt{-1} = \sqrt{36} \cdot \sqrt{2}\,i$

8. $\sqrt[3]{-72} = -2\sqrt[3]{9}$

$\sqrt[3]{-8} \cdot \sqrt[3]{9}$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$=$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}}$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1}$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} =$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} =$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} =$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\, i$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\, i =$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\,i =$

$=$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\,i =$

$= \frac{\sqrt{20}}{}$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\,i =$

$= \frac{\sqrt{20}}{\sqrt{25}}$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\, i =$

$= \frac{\sqrt{20}}{\sqrt{25}}$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\, i =$

$= \frac{\sqrt{20}}{\sqrt{25}}\, i$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\, i =$

$= \frac{\sqrt{20}}{\sqrt{25}}\, i =$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\, i =$

$= \frac{\sqrt{20}}{\sqrt{25}}\, i =$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\, i =$

$= \frac{\sqrt{20}}{\sqrt{25}}\, i = \frac{\sqrt{20}}{}$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\, i =$

$= \frac{\sqrt{20}}{\sqrt{25}}\, i = \frac{\sqrt{20}}{5}$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\, i =$

$= \frac{\sqrt{20}}{\sqrt{25}}\, i = \frac{\sqrt{20}}{5}$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\, i =$

$= \frac{\sqrt{20}}{\sqrt{25}}\, i = \frac{\sqrt{20}}{5}\, i$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\, i =$

$= \frac{\sqrt{20}}{\sqrt{25}}\, i = \frac{\sqrt{20}}{5}\, i =$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

9. $\sqrt{\frac{-4}{5}} =$

$= \sqrt{\frac{4}{5}} \cdot \sqrt{-1} = \sqrt{\frac{20}{25}}\, i =$

$= \frac{\sqrt{20}}{\sqrt{25}}\, i = \frac{\sqrt{20}}{5} i =$

$=$

10. $\sqrt[3]{\frac{-7}{9}} =$

Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

Step 2: Express $\sqrt{k}$ in simplest form and $\sqrt{-1} = i$.

General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

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Simplifying the Square Root of Negative Numbers

Step 1: Factor – Express the expression in the form $\sqrt{k} \cdot \sqrt{-1}$, where $k > 0$.

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General Algebra II Class Worksheet #3 Unit 7

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General Algebra II Class Worksheet #3 Unit 7

Express each of the following in simplest form.

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$= \sqrt{1.5}$

12. $\sqrt[3]{-1.5} =$

Simplifying the Square Root of Negative Numbers

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Simplifying the Square Root of Negative Numbers

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Good luck on your homework !!

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