# Algebra II <br> Lesson \#4 Unit 5 <br> Class Worksheet \#4 <br> For Worksheet \#5 

## The Complex Numbers

## The Complex Numbers

The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{\mathbf{2}}=\mathbf{k}$.

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The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{2}=\mathbf{k}$. The square root property states 'If $\mathbf{N}^{2}=\mathbf{k}$, then

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The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{\mathbf{2}}=\mathbf{k}$. The square root property states 'If $\mathbf{N}^{2}=\mathbf{k}$, then $\mathbf{N}=\sqrt{\mathbf{k}}$

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The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{2}=\mathbf{k}$. The square root property states 'If $\mathbf{N}^{2}=\mathbf{k}$, then $\mathbf{N}=\sqrt{\mathbf{k}}$ or $\mathbf{N}=-\sqrt{\mathbf{k}}$.,

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Consider these examples.

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Consider these examples.

1. $\mathrm{x}^{2}=9$

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Consider these examples.

1. $\mathbf{x}^{2}=9$
$x=\sqrt{9}$

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Consider these examples.

1. $x^{2}=9$
$x=\sqrt{9}$ or $x=-\sqrt{9}$

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Consider these examples.

1. $x^{2}=9$

$$
\begin{aligned}
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& \quad x=3
\end{aligned}
$$

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Consider these examples.

1. $x^{2}=9$

$$
\begin{gathered}
x=\sqrt{9} \text { or } x=-\sqrt{9} \\
x=3 \text { or } x=-3
\end{gathered}
$$

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Consider these examples.

1. $x^{2}=9$

$$
\begin{gathered}
x=\sqrt{9} \text { or } x=-\sqrt{9} \\
x=3 \text { or } x=-3
\end{gathered}
$$

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Consider these examples.

1. $\mathrm{x}^{2}=9$

$$
\begin{gathered}
x=\sqrt{9} \text { or } x=-\sqrt{9} \\
x=3 \text { or } x=-3
\end{gathered}
$$

These solutions are real numbers.

## The Complex Numbers

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Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

2. $x^{2}=-9$

These solutions are real numbers.

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Consider these examples.

$$
\begin{gathered}
\text { 1. } \mathbf{x}^{2}=9 \\
\mathbf{x}=\sqrt{9} \text { or } \mathbf{x}=-\sqrt{9} \\
\mathbf{x}=3 \text { or } \mathbf{x}=-3
\end{gathered} \text { These solutions are real numbers. }
$$

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Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

$$
\begin{aligned}
& \text { 2. } x^{2}=-9 \\
& x=\sqrt{-9} \text { or } x=-\sqrt{-9}
\end{aligned}
$$

These solutions are real numbers.

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The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{\mathbf{2}}=\mathbf{k}$. The square root property states 'If $\mathbf{N}^{2}=\mathbf{k}$, then $\mathbf{N}=\sqrt{k}$ or $\mathbf{N}=-\sqrt{\mathbf{k}}$.,

Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

$$
\begin{aligned}
& \text { 2. } \quad \mathbf{x}^{2}=-9 \\
& \begin{array}{l}
x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
x=3 i
\end{array}
\end{aligned}
$$

These solutions are real numbers.

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Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

$$
\begin{aligned}
& \text { 2. } \mathbf{x}^{2}=-9 \\
& \begin{array}{c}
x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
x=3 i \text { or } x=-3 i
\end{array}
\end{aligned}
$$

These solutions are real numbers.

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Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.
2. $x^{2}=-9$

$$
\begin{gathered}
x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
x=3 i \text { or } x=-3 i
\end{gathered}
$$

These solutions are imaginary numbers.

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Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.
2. $x^{2}=-9$

$$
\begin{gathered}
x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
x=3 i \text { or } x=-3 i
\end{gathered}
$$

These solutions are imaginary numbers.
3. $(x-2)^{2}=9$

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Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{aligned}
& \text { 3. }(x-2)^{2}=9 \\
& x-2=\sqrt{9}
\end{aligned}
$$

2. $x^{2}=-9$

$$
\begin{gathered}
x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
x=3 i \text { or } x=-3 i
\end{gathered}
$$

These solutions are imaginary numbers.

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Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{gathered}
\text { 3. } \quad(x-2)^{2}=9 \\
x-2=\sqrt{9} \text { or } x-2=-\sqrt{9}
\end{gathered}
$$

2. $x^{2}=-9$

$$
\begin{gathered}
x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
x=3 i \text { or } x=-3 i
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$$

These solutions are imaginary numbers.

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\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{aligned}
& \text { 3. } \quad(x-2)^{2}=9 \\
& x-2=\sqrt{9} \text { or } x-2=-\sqrt{9} \\
& x-2=3
\end{aligned}
$$

2. $x^{2}=-9$

$$
\begin{gathered}
x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
x=3 i \text { or } x=-3 i
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\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{gathered}
\text { 3. } \quad(x-2)^{2}=9 \\
x-2=\sqrt{9} \text { or } x-2=-\sqrt{9} \\
x-2=3 \text { or } x-2=-3
\end{gathered}
$$

2. $x^{2}=-9$

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x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
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\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{aligned}
& \text { 3. } \quad(x-2)^{2}=9 \\
& \begin{aligned}
& x-2= \sqrt{9} \text { or } x-2=-\sqrt{9} \\
& x-2=3 \text { or } x-2=-3 \\
& x=5
\end{aligned}
\end{aligned}
$$

2. $x^{2}=-9$

$$
\begin{gathered}
x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
x=3 i \text { or } x=-3 i
\end{gathered}
$$

These solutions are imaginary numbers.

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\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{gathered}
\text { 3. }(x-2)^{2}=9 \\
\begin{aligned}
& x-2= \sqrt{9} \text { or } x-2=-\sqrt{9} \\
& x-2=3 \text { or } x-2=-3 \\
& x=5 \text { or } x=-1
\end{aligned}
\end{gathered}
$$

2. $x^{2}=-9$

$$
\begin{gathered}
x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
x=3 i \text { or } x=-3 i
\end{gathered}
$$

These solutions are imaginary numbers.

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Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{gathered}
\text { 3. }(x-2)^{2}=9 \\
\begin{array}{c}
x-2=\sqrt{9} \text { or } x-2=-\sqrt{9} \\
x-2=3 \text { or } x-2=-3 \\
x=5 \text { or } x=-1
\end{array}
\end{gathered}
$$

These solutions are real numbers.

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Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{gathered}
\text { 3. }(x-2)^{2}=9 \\
\begin{array}{c}
x-2=\sqrt{9} \text { or } x-2=-\sqrt{9} \\
x-2=3 \text { or } x-2=-3 \\
x=5 \text { or } x=-1
\end{array}
\end{gathered}
$$

These solutions are real numbers.

$$
\begin{aligned}
& \text { 2. } x^{2}=-9 \\
& x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
& x=3 i \text { or } x=-3 i
\end{aligned}
$$

These solutions are imaginary numbers.
4. $(x-2)^{2}=-9$

## The Complex Numbers

The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{2}=\mathbf{k}$. The square root property states 'If $\mathbf{N}^{2}=\mathbf{k}$, then $\mathbf{N}=\sqrt{k}$ or $\mathbf{N}=-\sqrt{\mathbf{k}}$.,

Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{gathered}
\text { 3. }(x-2)^{2}=9 \\
\begin{array}{c}
x-2=\sqrt{9} \text { or } x-2=-\sqrt{9} \\
x-2=3 \text { or } x-2=-3 \\
x=5 \text { or } x=-1
\end{array}
\end{gathered}
$$

These solutions are real numbers.

$$
\begin{aligned}
& \text { 2. } x^{2}=-9 \\
& x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
& x=3 i \text { or } x=-3 i
\end{aligned}
$$

These solutions are imaginary numbers.
4. $(x-2)^{2}=-9$
$x-2=\sqrt{-9}$

## The Complex Numbers

The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{2}=\mathbf{k}$. The square root property states 'If $\mathbf{N}^{2}=\mathbf{k}$, then $\mathbf{N}=\sqrt{k}$ or $\mathbf{N}=-\sqrt{\mathbf{k}}$.,

Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{gathered}
\text { 3. }(x-2)^{2}=9 \\
\begin{array}{c}
x-2=\sqrt{9} \text { or } x-2=-\sqrt{9} \\
x-2=3 \text { or } x-2=-3 \\
x=5 \text { or } x=-1
\end{array}
\end{gathered}
$$

These solutions are real numbers.

$$
\begin{aligned}
& \text { 2. } x^{2}=-9 \\
& x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
& x=3 i \text { or } x=-3 i
\end{aligned}
$$

These solutions are imaginary numbers.

$$
\begin{gathered}
\text { 4. }(x-2)^{2}=-9 \\
x-2=\sqrt{-9} \text { or } x-2=-\sqrt{-9}
\end{gathered}
$$

## The Complex Numbers

The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{2}=\mathbf{k}$. The square root property states 'If $\mathbf{N}^{2}=\mathbf{k}$, then $\mathbf{N}=\sqrt{\mathbf{k}}$ or $\mathbf{N}=-\sqrt{\mathbf{k}}$.,

Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{gathered}
\text { 3. }(x-2)^{2}=9 \\
\begin{array}{c}
x-2=\sqrt{9} \text { or } x-2=-\sqrt{9} \\
x-2=3 \text { or } x-2=-3 \\
x=5 \text { or } x=-1
\end{array}
\end{gathered}
$$

These solutions are real numbers.

$$
\begin{aligned}
& \text { 2. } x^{2}=-9 \\
& x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
& x=3 i \text { or } x=-3 i
\end{aligned}
$$

These solutions are imaginary numbers.

$$
\begin{aligned}
& \text { 4. } \quad(x-2)^{2}=-9 \\
& x-2=\sqrt{-9} \text { or } x-2=-\sqrt{-9} \\
& x-2=3 i
\end{aligned}
$$

## The Complex Numbers

The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{2}=\mathbf{k}$. The square root property states 'If $\mathbf{N}^{2}=\mathbf{k}$, then $\mathbf{N}=\sqrt{k}$ or $\mathbf{N}=-\sqrt{\mathbf{k}}$.,

Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{gathered}
\text { 3. }(x-2)^{2}=9 \\
\begin{array}{c}
x-2=\sqrt{9} \text { or } x-2=-\sqrt{9} \\
x-2=3 \text { or } x-2=-3 \\
x=5 \text { or } x=-1
\end{array}
\end{gathered}
$$

These solutions are real numbers.

$$
\begin{aligned}
& \text { 2. } x^{2}=-9 \\
& x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
& x=3 i \text { or } x=-3 i
\end{aligned}
$$

These solutions are imaginary numbers.

$$
\begin{aligned}
& \text { 4. }(x-2)^{2}=-9 \\
& x-2=\sqrt{-9} \text { or } x-2=-\sqrt{-9} \\
& x-2=3 i \text { or } x-2=-3 i
\end{aligned}
$$

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The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{2}=\mathbf{k}$. The square root property states 'If $\mathbf{N}^{2}=\mathbf{k}$, then $\mathbf{N}=\sqrt{\mathbf{k}}$ or $\mathbf{N}=-\sqrt{\mathbf{k}}$.,

Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{gathered}
\text { 3. }(x-2)^{2}=9 \\
\begin{array}{c}
x-2=\sqrt{9} \text { or } x-2=-\sqrt{9} \\
x-2=3 \text { or } x-2=-3 \\
x=5 \text { or } x=-1
\end{array}
\end{gathered}
$$

These solutions are real numbers.

$$
\begin{aligned}
& \text { 2. } x^{2}=-9 \\
& x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
& x=3 i \text { or } x=-3 i
\end{aligned}
$$

These solutions are imaginary numbers.

$$
\begin{aligned}
& \text { 4. }(x-2)^{2}=-9 \\
& x-2=\sqrt{-9} \text { or } x-2=-\sqrt{-9} \\
& x-2=3 i \text { or } x-2=-3 i \\
& x=2+3 i
\end{aligned}
$$

## The Complex Numbers

The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{2}=\mathbf{k}$. The square root property states 'If $\mathbf{N}^{2}=\mathbf{k}$, then $\mathbf{N}=\sqrt{k}$ or $\mathbf{N}=-\sqrt{\mathbf{k}}$.,

Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{gathered}
\text { 3. }(x-2)^{2}=9 \\
\begin{aligned}
x-2= & \sqrt{9} \text { or } x-2=-\sqrt{9} \\
x-2 & =3 \text { or } x-2=-3 \\
x=5 & \text { or } x=-1
\end{aligned}
\end{gathered}
$$

These solutions are real numbers.

$$
\begin{aligned}
& \text { 2. } x^{2}=-9 \\
& \begin{array}{l}
x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
x=3 i \text { or } x=-3 i
\end{array}
\end{aligned}
$$

These solutions are imaginary numbers.

$$
\begin{gathered}
\text { 4. }(x-2)^{2}=-9 \\
x-2=\sqrt{-9} \text { or } x-2=-\sqrt{-9} \\
x-2=3 i \text { or } x-2=-3 i \\
x=2+3 i \text { or } x=2+-3 i
\end{gathered}
$$

## The Complex Numbers

The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{2}=\mathbf{k}$. The square root property states 'If $\mathbf{N}^{2}=\mathbf{k}$, then $\mathbf{N}=\sqrt{\mathbf{k}}$ or $\mathbf{N}=-\sqrt{\mathbf{k}}$.'

Consider these examples.

$$
\begin{aligned}
& \text { 1. } x^{2}=9 \\
& x=\sqrt{9} \text { or } x=-\sqrt{9} \\
& x=3 \text { or } x=-3
\end{aligned}
$$

These solutions are real numbers.

$$
\begin{gathered}
\text { 3. }(x-2)^{2}=9 \\
\begin{array}{c}
x-2=\sqrt{9} \text { or } x-2=-\sqrt{9} \\
x-2=3 \text { or } x-2=-3 \\
x=5 \text { or } x=-1
\end{array}
\end{gathered}
$$

These solutions are real numbers.

$$
\begin{aligned}
& \text { 2. } x^{2}=-9 \\
& x=\sqrt{-9} \text { or } x=-\sqrt{-9} \\
& x=3 i \text { or } x=-3 i
\end{aligned}
$$

These solutions are imaginary numbers.

$$
\begin{gathered}
\text { 4. }(x-2)^{2}=-9 \\
x-2=\sqrt{-9} \text { or } x-2=-\sqrt{-9} \\
x-2=3 i \text { or } x-2=-3 i \\
x=2+3 i \text { or } x=2+-3 i
\end{gathered}
$$

## The Complex Numbers

The 'Square Root Property' is used to solve equations of the form $\mathbf{N}^{2}=\mathbf{k}$. The square root property states 'If $\mathbf{N}^{2}=\mathbf{k}$, then $\mathbf{N}=\sqrt{k}$ or $\mathbf{N}=-\sqrt{\mathbf{k}}$.,

Consider these examples.

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\begin{aligned}
& \text { 1. } x^{2}=9 \\
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\end{aligned}
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These solutions are the sum of a real number

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\begin{aligned}
x-2= & \sqrt{9} \text { or } x-2=-\sqrt{9} \\
x-2 & =3 \text { or } x-2=-3 \\
x & =5 \text { or } x=-1
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A complex number is defined to be any number that can be expressed in the form $\underline{a}+b \mathbf{i}$ where $\underline{a}$ and $\underline{b}$ are real numbers and $i=\sqrt{-1}$.

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You have learned how to do many different 'things' with the real numbers.

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You have learned how to do many different 'things' with the real numbers. This includes graphing them, finding their absolute value, and performing the basic operations. You will be learning how to do the same 'things' with the complex numbers. We will begin by reviewing the subsets of the set of real numbers.

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## The Real Number System

The Real Number System Subsets of the Real Numbers

# The Real Number System Subsets of the Real Numbers 

The Natural Numbers:

The Real Number System Subsets of the Real Numbers
The Natural Numbers: $\mathrm{N}=\{1,2,3,4, \ldots\}$

# The Real Number System Subsets of the Real Numbers 

The Natural Numbers: $\mathrm{N}=\{1,2,3,4, \ldots\}$
(These are also called the counting numbers.)

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$$
I=\{\ldots,-4,-3,-2,-1,0,1,2,3,4, \ldots\}
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The Rational Numbers: Any number that can be expressed as the ratio of two integers is a rational number.

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As decimals, rational numbers are either terminating decimals or repeating decimals.

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The Irrational Numbers: Any real number that can not be expressed as the ratio of two integers is an irrational number.

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As decimals, irrational numbers are non-terminating, non-repeating decimals.
The set of Real Numbers can be represented by a number line.

## The Real Number System



## The Complex Number System

The Complex Number System
Subsets of the Complex Numbers

The Complex Number System
Subsets of the Complex Numbers
The Real Numbers

The Complex Number System
Subsets of the Complex Numbers
The Real Numbers
The Imaginary Numbers

# The Complex Number System <br> Subsets of the Complex Numbers 

## The Real Numbers

The Imaginary Numbers
Any number that can be represented in the form $\mathbf{b i}$, where $b$ is a real number and $i=\sqrt{-1}$, is an imaginary number.

# The Complex Number System <br> Subsets of the Complex Numbers 

## The Real Numbers

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

The Complex Numbers

## The Complex Number System <br> Subsets of the Complex Numbers

## The Real Numbers

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

The Complex Numbers
Any number that can be represented in the form $\mathbf{a}+\mathbf{b i}$, where a and b are real numbers and $\mathrm{i}=\sqrt{-1}$, is a complex number.

# The Complex Number System <br> Subsets of the Complex Numbers 

## The Real Numbers

## The Imaginary Numbers

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

## The Complex Numbers

Any number that can be represented in the form $\mathbf{a}+\mathbf{b i}$, where a and b are real numbers and $\mathrm{i}=\sqrt{-1}$, is a complex number.

Note: If $\mathbf{a}=\mathbf{0}$, then $\mathbf{a}+\mathbf{b i}$ represents an imaginary number, and if $\mathbf{b}=\mathbf{0}$, then $\mathbf{a}+\mathbf{b i}$ represents a real number.

# The Complex Number System <br> Subsets of the Complex Numbers 

## The Real Numbers

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

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The set of Complex Numbers can be represented by a number plane.

The Complex Number System

The Complex Number System


The Complex Number System


## The Complex Number System



## The Complex Number System

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i


## Algebra II Class Worksheet \#4 Unit 5

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Graphing Complex Numbers

The Complex Number Plane


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2. $-3+5 i$
3. $-6-8 i$
4. $9-4 \mathrm{i}$
5. 7
6. -5 i

Graphing Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

The 'real component' of the number is 7.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

The 'real component' of the number is 7.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

The 'real component' of the number is 7 .
The 'imaginary component' of this number is $4 i$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is 7.
The 'imaginary component' of this number is 4 i .

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is 7.
The 'imaginary component' of this number is 4 i .

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is 7.
The 'imaginary component' of this number is 4 i .

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

Graphing Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

Graphing Complex Numbers


## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 \mathrm{i}$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is $\mathbf{- 3}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-\mathbf{3}+5 \mathbf{i}$
3. $-6-8 i$
4. $9-4 \mathrm{i}$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is $\mathbf{- 3}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is $\mathbf{- 3}$.
The 'imaginary component' of this number is $\mathbf{5 i}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is $\mathbf{- 3}$.
The 'imaginary component' of this number is $\mathbf{5 i}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is $\mathbf{- 3}$.
The 'imaginary component' of this number is $\mathbf{5 i}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is $\mathbf{- 3}$.
The 'imaginary component' of this number is $\mathbf{5 i}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

Graphing Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i$
4. $9-4 i$
5. 7
6. -5 i

Graphing Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-\mathbf{3}+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i$
5. 7
6. -5 i

Graphing Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i=-6+-8 i$
4. $9-4 \mathrm{i}$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is $\mathbf{- 6}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i=-6+-8 i$
4. $9-4 \mathrm{i}$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is $\mathbf{- 6}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

The 'real component' of the number is $\mathbf{- 6}$.
The 'imaginary component' of this number is $\mathbf{- 8 i}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i=-6+-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

The 'real component' of the number is $\mathbf{- 6}$.
The 'imaginary component' of this number is $\mathbf{- 8 i}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i=-6+-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

The 'real component' of the number is $\mathbf{- 6}$.
The 'imaginary component' of this number is $\mathbf{- 8 i}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i=-6+-8 i$
4. $9-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

The 'real component' of the number is $\mathbf{- 6}$.
The 'imaginary component' of this number is $\mathbf{- 8 i}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

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3. $-6-8 i=-6+-8 i$
4. $9-4 i$
5. 7
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## Graphing Complex Numbers

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

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3. $-6-8 i=-6+-8 i$
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5. 7
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## Graphing Complex Numbers

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4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

The 'real component' of the number is 9 .

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

The 'real component' of the number is 9 .

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is 9 .
The 'imaginary component' of this number is $\mathbf{- 4 i}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



The 'real component' of the number is 9 .
The 'imaginary component' of this number is $\mathbf{- 4 i}$.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

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2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



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4. $9-4 i=9+-4 i$
5. 7
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## Graphing Complex Numbers



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4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



Any real number is associated with a unique point on the real number line.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



Any real number is associated with a unique point on the real number line.

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Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers



Any real number is associated with a unique point on the real number line.

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2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

Graphing Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. $-5 \mathbf{i}$

## Graphing Complex Numbers

Any imaginary number is associated with a unique point on the imaginary number line.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. $-5 \mathbf{i}$

## Graphing Complex Numbers

Any imaginary number is associated with a unique point on the imaginary number line.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 \mathrm{i}$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

## Graphing Complex Numbers

Any imaginary number is associated with a unique point on the imaginary number line.

## Algebra II Class Worksheet \#4 Unit 5

Graph each of the following numbers on the complex number plane. Label your graphs properly.

1. $7+4 i$
2. $-3+5 i$
3. $-6-8 i=-6+-8 i$
4. $9-4 i=9+-4 i$
5. 7
6. -5 i

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$
9. $|3-6 i|=$ $\qquad$
10. $|-1-4 i|=$ $\qquad$
11. $|-4 \mathbf{i}|=$ $\qquad$
12. $|7|=$ $\qquad$

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$
9. $|3-6 i|=$ $\qquad$
10. $|-1-4 i|=$ $\qquad$
11. $|-4 i|=$ $\qquad$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$
9. $|3-6 i|=$ $\qquad$
10. $|-1-4 i|=$ $\qquad$
11. $|-4 i|=$ $\qquad$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of a real number gives its distance from zero on the real number line.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$
9. $|3-6 i|=$ $\qquad$
10. $|-1-4 i|=$ $\qquad$
11. $|-4 i|=$ $\qquad$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of a real number gives its distance from zero on the real number line. This 'definition' holds true for complex numbers as well.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$
9. $|3-6 i|=$ $\qquad$
10. $|-1-4 i|=$ $\qquad$
11. $|-4 i|=$ $\qquad$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of a real number gives its distance from zero on the real number line. This 'definition' holds true for complex numbers as well. Of course, distance is never negative

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$
9. $|3-6 i|=$ $\qquad$
10. $|-1-4 i|=$ $\qquad$
11. $|-4 i|=$ $\qquad$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of a real number gives its distance from zero on the real number line. This 'definition' holds true for complex numbers as well. Of course, distance is never negative and is always a real number.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown. The Pythagorean Theorem can be used to find this distance.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown. The Pythagorean Theorem can be used to find this distance.

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Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown. The Pythagorean Theorem can be used to find this distance.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
$|4+3 i|=$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown. The Pythagorean Theorem can be used to find this distance.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$ $|4+3 i|=\sqrt{ }$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown. The Pythagorean Theorem can be used to find this distance.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$

$$
|4+3 i|=\sqrt{4^{2}}
$$

8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown. The Pythagorean Theorem can be used to find this distance.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
$|4+3 i|=\sqrt{4^{2}+}$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown. The Pythagorean Theorem can be used to find this distance.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
$|4+3 i|=\sqrt{4^{2}+3^{2}}$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown. The Pythagorean Theorem can be used to find this distance.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
$|4+3 i|=\sqrt{4^{2}+3^{2}}=$
$|4+3 i|=$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown. The Pythagorean Theorem can be used to find this distance.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
$|4+3 i|=\sqrt{4^{2}+3^{2}}=$
$|4+3 i|=\sqrt{16+9}$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown. The Pythagorean Theorem can be used to find this distance.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=$ $\qquad$
$|4+3 i|=\sqrt{4^{2}+3^{2}}=$
$|4+3 i|=\sqrt{16+9}=\sqrt{25}$
8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown. The Pythagorean Theorem can be used to find this distance.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 7. }|4+3 i|=\frac{5}{|4+3 i|=\sqrt{4^{2}+3^{2}}=} \\
& |4+3 i|=\sqrt{16+9}=\sqrt{25}
\end{aligned}
$$

8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


The absolute value of the complex number $4+3 \mathrm{i}$ is the distance this number is from zero. This is equal to the length of the hypotenuse of the right triangle shown. The Pythagorean Theorem can be used to find this distance.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 7. }|4+3 i|=\frac{5}{|4+3 i|=\sqrt{4^{2}+3^{2}}=} \\
& |4+3 i|=\sqrt{16+9}=\sqrt{25} \\
& 4+3 i \text { is } 5 \text { units from } 0!
\end{aligned}
$$

8. $|-2+3 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


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## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
7. $|4+3 i|=\underline{5}$
$|4+3 i|=\sqrt{4^{2}+3^{2}}=$
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The Absolute Value of Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

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The Absolute Value of Complex Numbers

The Complex Number Plane


Notice that $|4+3 i|=$

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The Absolute Value of Complex Numbers

The Complex Number Plane


Notice that $|4+3 i|=\sqrt{4^{2}+3^{2}}$.

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The Absolute Value of Complex Numbers

The Complex Number Plane


Notice that $|4+3 i|=\sqrt{4^{2}+3^{2}}$. In general, $|a+b i|=$

## Algebra II Class Worksheet \#4 Unit 5

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The Complex Number Plane


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The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
Notice that $|4+3 i|=\sqrt{4^{2}+3^{2}}$. In general, $|a+b i|=\sqrt{a^{2}+b^{2}}$.

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The Absolute Value of Complex Numbers

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The Absolute Value of Complex Numbers

The Complex Number Plane


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The Complex Number Plane


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The Absolute Value of Complex Numbers

The Complex Number Plane


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The Absolute Value of Complex Numbers

The Complex Number Plane


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The Absolute Value of Complex Numbers

The Complex Number Plane


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The Absolute Value of Complex Numbers

The Complex Number Plane


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The Absolute Value of Complex Numbers

The Complex Number Plane


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The Absolute Value of Complex Numbers

The Complex Number Plane


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The Absolute Value of Complex Numbers

The Complex Number Plane


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The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


The distance from $-2+3 i$ to zero

## Algebra II Class Worksheet \#4 Unit 5

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The Absolute Value of Complex Numbers

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The Complex Number Plane


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The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


The distance from $\mathbf{- 2}+3 i$ to zero is $\sqrt{13}$

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$|-2+3 i|=\sqrt{(-2)^{2}+3^{2}}=$
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The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


The distance from $\mathbf{- 2}+3 i$ to zero is $\sqrt{13} \approx 3.6$ units.

## Algebra II Class Worksheet \#4 Unit 5

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The Absolute Value of Complex Numbers

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|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
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The Complex Number Plane


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The Absolute Value of Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=$ $\qquad$
10. $|-1-4 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

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The Absolute Value of Complex Numbers

The Complex Number Plane

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The Absolute Value of Complex Numbers

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The Absolute Value of Complex Numbers

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The Complex Number Plane


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Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=$ $\qquad$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=$
10. $|-1-4 i|=$ $\qquad$

The Absolute Value of Complex Numbers

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|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
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The Complex Number Plane


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The Absolute Value of Complex Numbers

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The Absolute Value of Complex Numbers

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The Complex Number Plane


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The Absolute Value of Complex Numbers

The Complex Number Plane

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The Absolute Value of Complex Numbers

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The Complex Number Plane


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$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{ }$
10. $|-\mathbf{1}-\mathbf{4 i}|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

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$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9}$
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The Absolute Value of Complex Numbers

The Complex Number Plane

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The Absolute Value of Complex Numbers

The Complex Number Plane

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## Algebra II Class Worksheet \#4 Unit 5

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$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}$
10. $|-1-4 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

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## Algebra II Class Worksheet \#4 Unit 5

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\begin{aligned}
& \text { 9. }|3-6 i|= \\
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& |3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}= \\
& |3-6 i|=
\end{aligned}
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The Absolute Value of Complex Numbers

The Complex Number Plane

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& |3-6 i|=\sqrt{45}
\end{aligned}
$$

10. $|-1-4 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

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The Absolute Value of Complex Numbers

The Complex Number Plane

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The Absolute Value of Complex Numbers

The Complex Number Plane

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& |\mathbf{a}+b i|=\sqrt{a^{2}+b^{2}} \\
& |3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}= \\
& |3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5} \\
& \text { 10. }|-1-4 i|=
\end{aligned}
$$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=$ $\qquad$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=$
10. $|-1-4 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

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9. $|3-6 i|=$ $\qquad$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
10. $|-1-4 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 9. }|3-6 i|=\frac{3 \sqrt{5}}{} \\
& |a+b i|=\sqrt{a^{2}+b^{2}} \\
& |3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}= \\
& |3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}
\end{aligned}
$$

10. $|-1-4 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 9. }|3-6 i|=\frac{3 \sqrt{5}}{\mid} \\
& |a+b i|=\sqrt{a^{2}+b^{2}} \\
& |3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}= \\
& |3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}
\end{aligned}
$$

10. $|-1-4 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

The distance from 3-6i to zero

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 9. }|3-6 i|=\frac{3 \sqrt{5}}{\mid} \\
& |a+b i|=\sqrt{a^{2}+b^{2}} \\
& |3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}= \\
& |3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}
\end{aligned}
$$

10. $|-1-4 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

The distance from 3-6i to zero

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

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\begin{aligned}
& \text { 9. }|3-6 i|=\frac{3 \sqrt{5}}{\mid} \\
& |a+b i|=\sqrt{a^{2}+b^{2}} \\
& |3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}= \\
& |3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}
\end{aligned}
$$

10. $|-1-4 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
The distance from $3-6 i$ to zero is $3 \sqrt{5}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 9. }|3-6 i|=\frac{3 \sqrt{5}}{\mid} \\
& |a+b i|=\sqrt{a^{2}+b^{2}} \\
& |3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}= \\
& |3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}
\end{aligned}
$$

10. $|-\mathbf{1}-4 \mathrm{i}|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The distance from $3-6 i$ to zero is $3 \sqrt{5} \approx 6.7$ units.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 9. }|3-6 i|=\frac{3 \sqrt{5}}{\mid} \\
& |a+b i|=\sqrt{a^{2}+b^{2}} \\
& |3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}= \\
& |3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}
\end{aligned}
$$

10. $|-\mathbf{1}-4 \mathrm{i}|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The distance from $3-6 i$ to zero is $3 \sqrt{5} \approx 6.7$ units.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
10. $|-1-4 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

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The Absolute Value of Complex Numbers

The Complex Number Plane

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## Algebra II Class Worksheet \#4 Unit 5

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10. $|-1-4 i|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

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10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

The Absolute Value of Complex Numbers

The Complex Number Plane

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10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=$

The Absolute Value of Complex Numbers


## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-\mathbf{1}+-4 i|=\sqrt{ }$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$
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$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}}$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+}$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
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10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$
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$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
$|-1-4 i|=$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
$|-\mathbf{1}-\mathbf{4 i}|=\sqrt{ }$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
$|-1-4 i|=\sqrt{1}$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
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$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
$|-1-4 i|=\sqrt{1+}$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
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10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
$|-1-4 i|=\sqrt{1+16}$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$
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$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
$|-1-4 i|=\sqrt{1+16}=$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

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10. $|-1-4 i|=$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
$|-1-4 i|=\sqrt{1+16}=\sqrt{17}$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

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10. $|-1-4 i|=\sqrt{17}$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
$|-1-4 i|=\sqrt{1+16}=\sqrt{17}$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$

The Complex Number Plane
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
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$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
$|-1-4 i|=\sqrt{1+16}=\sqrt{17}$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b} \mathbf{i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$

The Complex Number Plane
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
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$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
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The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b} \mathbf{i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$

The Complex Number Plane
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
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$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
$|-1-4 i|=\sqrt{1+16}=\sqrt{17}$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
The distance from - $\mathbf{- 4 i}$ to zero is $\sqrt{17}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$

The Complex Number Plane
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
10. $|-1-4 i|=\sqrt{17}$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
$|-1-4 i|=\sqrt{1+16}=\sqrt{17}$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
The distance from - $1-4 i$ to zero is $\sqrt{17} \approx 4.1$ units.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
9. $|3-6 i|=3 \sqrt{5}$

The Complex Number Plane
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|3+-6 i|=\sqrt{3^{2}+(-6)^{2}}=\sqrt{9+36}=$ $|3-6 i|=\sqrt{45}=\sqrt{9} \cdot \sqrt{5}=3 \sqrt{5}$
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The Absolute Value of Complex Numbers

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The distance from $\mathbf{- 1}-4 i$ to zero is $\sqrt{17} \approx 4.1$ units.

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$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|-1+-4 i|=\sqrt{(-1)^{2}+(-4)^{2}}=$
$|-1-4 i|=\sqrt{1+16}=\sqrt{17}$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
11. $|-4 i|=$ $\qquad$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
11. $|-4 \mathbf{i}|=$ $\qquad$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

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11. $|-4 \mathbf{i}|=$ $\qquad$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

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## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
11. $|-4 i|=$ $\qquad$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

## Algebra II Class Worksheet \#4 Unit 5

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11. $|-4 i|=$ $\qquad$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

Clearly, the distance from -4i to zero is 4 units.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\text { 11. }|-4 i|=4
$$

12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b} \mathbf{i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


Clearly, the distance from -4i to zero is 4 units.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

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12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane


## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\text { 11. }|-4 i|=4
$$

12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b} \mathbf{i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


What if we used the formula

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
11. $|-4 i|=$ $\qquad$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


What if we used the formula

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
11. $|-4 i|=$ $\qquad$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

What if we used the formula to find $|-4 i|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
11. $|-4 i|=$ $\qquad$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|0+-4 i|=$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b} \mathbf{i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


What if we used the formula to find $|-4 i|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
11. $|-4 \mathbf{i}|=$ $\qquad$
$|a+b i|=\sqrt{\mathbf{a}^{2}+b^{2}}$
$|0+-4 i|=\sqrt{ }$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b} \mathbf{i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


What if we used the formula to find $|-4 i|$ ?

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$|0+-4 i|=\sqrt{0^{2}}$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

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|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
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The Complex Number Plane


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$|0+-4 i|=\sqrt{0^{2}+}$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

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|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
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The Complex Number Plane


What if we used the formula to find $|-4 i|$ ?

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11. $|-4 i|=$ $\qquad$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


What if we used the formula to find $|-4 i|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
11. $|-4 i|=$ $\qquad$
$|a+b i|=\sqrt{\mathbf{a}^{2}+b^{2}}$
$|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b} \mathbf{i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


What if we used the formula to find $|-4 i|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\text { 11. }|-4 i|=4
$$

$|a+b i|=\sqrt{\mathbf{a}^{2}+b^{2}}$ $|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{ }$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


What if we used the formula to find $|-4 i|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\text { 11. }|-4 i|=4
$$

$|a+b i|=\sqrt{\mathbf{a}^{2}+b^{2}}$
$|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0}$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


What if we used the formula to find $|-4 i|$ ?

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$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+}$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

The Complex Number Plane


What if we used the formula to find $|-4 i|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
11. $|-4 i|=\frac{4}{\sqrt{a^{2}+b^{2}}}$
$|a+b i|=\sqrt{\mathbf{a}^{2}+b^{2}}$
$|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}$
12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\text { 11. }|-4 i|=4
$$

$|a+b i|=\sqrt{\mathbf{a}^{2}+b^{2}}$
$|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}=$

$$
|-4 i|=
$$

12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
What if we used the formula to find $|-4 i|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 11. }|-4 i|=\frac{4}{|a+b i|=\sqrt{a^{2}+b^{2}}} \\
& |0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}= \\
& |-4 i|=\sqrt{16}=
\end{aligned}
$$

12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
What if we used the formula to find $|-4 i|$ ?

## Algebra II Class Worksheet \#4 Unit 5

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& |-4 i|=\sqrt{16}=4
\end{aligned}
$$

12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
What if we used the formula to find $|-4 i|$ ?

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Find the indicated absolute values. Express your answers in simplest form.

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& \text { 11. }|-4 i|=\frac{4}{|a+b i|=\sqrt{a^{2}+b^{2}}} \\
& |\mathbf{a}+4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}= \\
& |-4 i|=\sqrt{16}=4
\end{aligned}
$$

12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane
$\boldsymbol{\sim}^{\text {Imaginary Number Line }}$

$$
|\mathbf{a}+\mathbf{b} \mathbf{i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

Of course, you don't need to use the formula to find the absolute value of any imaginary number.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
11. $|-4 i|=\frac{4}{\sqrt{a^{2}+b^{2}}}$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}=$

$$
|-4 i|=\sqrt{16}=4
$$

12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
11. $|-4 i|=4$
The Complex Number Plane
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}=$ $|-4 i|=\sqrt{16}=4$
12. $|7|=$ $\qquad$ Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

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Find the indicated absolute values. Express your answers in simplest form.
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The Complex Number Plane
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|-4 i|=\sqrt{16}=4
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12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

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$$
|-4 i|=\sqrt{16}=4
$$

12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

Clearly, the distance from 7 to zero

## Algebra II Class Worksheet \#4 Unit 5

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The Complex Number Plane
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12. $|7|=$ $\qquad$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

Clearly, the distance from 7 to zero is 7 units.

## Algebra II Class Worksheet \#4 Unit 5

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$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}=$ $|-4 i|=\sqrt{16}=4$
12. $|7|=7$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

Clearly, the distance from 7 to zero is 7 units.

## Algebra II Class Worksheet \#4 Unit 5

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$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
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The Absolute Value of Complex Numbers

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What if we used the formula

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The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
What if we used the formula to find $|7|$ ?

## Algebra II Class Worksheet \#4 Unit 5

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$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
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12. $|7|=7$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|7+0 i|=$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

What if we used the formula to find $|7|$ ?

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12. $|7|=7$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|7+0 i|=\sqrt{ }$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
What if we used the formula to find $|7|$ ?

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12. $|7|=7$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|7+0 i|=\sqrt{7^{2}}$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
What if we used the formula to find $|7|$ ?

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12. $|7|=7$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|7+0 i|=\sqrt{7^{2}+}$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
What if we used the formula to find $|7|$ ?

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The Absolute Value of Complex Numbers

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12. $|7|=7$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|7+0 i|=\sqrt{7^{2}+0^{2}}=$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
What if we used the formula to find $|7|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\text { 11. }|-4 i|=4 \quad \text { The Complex Number Plane }
$$

$$
\begin{gathered}
|a+b i|=\sqrt{a^{2}+b^{2}} \\
|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}= \\
|-4 i|=\sqrt{16}=4
\end{gathered}
$$

12. $|7|=7$
$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
$|7+0 i|=\sqrt{7^{2}+0^{2}}=\sqrt{ }$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

What if we used the formula to find $|7|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\text { 11. }|-4 \mathbf{i}|=4 \quad \text { The Complex Number Plane }
$$

$$
\begin{gathered}
|a+b i|=\sqrt{a^{2}+b^{2}} \\
|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}= \\
|-4 i|=\sqrt{16}=4
\end{gathered}
$$

12. $|7|=\underline{7}$
$|a+b i|=\sqrt{\mathbf{a}^{2}+b^{2}}$
$|7+0 i|=\sqrt{7^{2}+0^{2}}=\sqrt{49}$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

What if we used the formula to find $|7|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\text { 11. }|-4 \mathbf{i}|=4 \quad \text { The Complex Number Plane }
$$

$$
\begin{gathered}
|a+b i|=\sqrt{a^{2}+b^{2}} \\
|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}= \\
|-4 i|=\sqrt{16}=4
\end{gathered}
$$

12. $|7|=\underline{7}$
$|a+b i|=\sqrt{\mathbf{a}^{2}+b^{2}}$
$|7+0 i|=\sqrt{7^{2}+0^{2}}=\sqrt{49+}$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

What if we used the formula to find $|7|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\text { 11. }|-4 \mathbf{i}|=4 \quad \text { The Complex Number Plane }
$$

$$
\begin{gathered}
|a+b i|=\sqrt{a^{2}+b^{2}} \\
|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}= \\
|-4 i|=\sqrt{16}=4
\end{gathered}
$$

12. $|7|=\underline{7}$
$|a+b i|=\sqrt{\mathbf{a}^{2}+b^{2}}$
$|7+0 i|=\sqrt{7^{2}+0^{2}}=\sqrt{49+0}$

The Absolute Value of Complex Numbers

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
What if we used the formula to find $|7|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 11. }|-4 i|=\frac{4}{|a+b i|=\sqrt{a^{2}+b^{2}}} \\
& |a+4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}= \\
& |0+-4 i|=\sqrt{16}=4 \\
& \text { 12. }|7|=\frac{7}{|a+b i|=\sqrt{a^{2}+b^{2}}} \\
& |7+0 i|=\sqrt{7^{2}+0^{2}}=\sqrt{49+0}= \\
& |7|=
\end{aligned}
$$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

What if we used the formula to find $|7|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 11. } \left.|-4 i|=\frac{4}{|c|} \right\rvert\,=\sqrt{a^{2}+b^{2}} \\
& |\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+(-4)^{2}}=\sqrt{0+16}= \\
& |0+-4 i|=\sqrt{0^{2}}= \\
& |-4 i|=\sqrt{16}=4 \\
& \text { 12. }|7|=\frac{7}{|a+b i|=\sqrt{a^{2}+b^{2}}} \\
& |7+0 i|=\sqrt{7^{2}+0^{2}}=\sqrt{49+0}= \\
& |7|=\sqrt{49}=
\end{aligned}
$$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

What if we used the formula to find $|7|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

$$
\begin{aligned}
& \text { 11. } \left.|-4 i|=\frac{4}{|c|} \right\rvert\,=\sqrt{a^{2}+b^{2}} \\
& |0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}= \\
& |-4 i|=\sqrt{16}=4 \\
& \text { 12. }|7|=\frac{7}{|a+b i|=\sqrt{a^{2}+b^{2}}} \\
& |7+0 i|=\sqrt{7^{2}+0^{2}}=\sqrt{49+0}= \\
& |7|=\sqrt{49}=7
\end{aligned}
$$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$

What if we used the formula to find $|7|$ ?

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.

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\begin{aligned}
& \text { 11. }|-4 i|=\frac{4}{|a+b i|=\sqrt{a^{2}+b^{2}}} \\
& |a+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}= \\
& |-4 i|=\sqrt{16}=4 \\
& \mid 0+3 \\
& \text { 12. }|7|=\frac{7}{|a+b i|=\sqrt{a^{2}+b^{2}}} \\
& |7+0 i|=\sqrt{7^{2}+0^{2}}=\sqrt{49+0}= \\
& |7|=\sqrt{49}=7
\end{aligned}
$$

The Absolute Value of Complex Numbers

The Complex Number Plane

$|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}$
Of course, you don't need to use the formula to find the absolute value of any real number.

## Algebra II Class Worksheet \#4 Unit 5

Find the indicated absolute values. Express your answers in simplest form.
11. $|-4 i|=4$
The Complex Number Plane

$$
\begin{gathered}
|a+b i|=\sqrt{a^{2}+b^{2}} \\
|0+-4 i|=\sqrt{0^{2}+(-4)^{2}}=\sqrt{0+16}= \\
|-4 i|=\sqrt{16}=4
\end{gathered}
$$

12. $|7|=$

$$
|\mathbf{a}+\mathbf{b} \mathbf{i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

$$
|7+0 i|=\sqrt{7^{2}+0^{2}}=\sqrt{49+0}=
$$

$$
|7|=\sqrt{49}=7
$$

The Absolute Value of Complex Numbers


$$
|\mathbf{a}+\mathbf{b i}|=\sqrt{\mathbf{a}^{2}+\mathbf{b}^{2}}
$$

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i$ $\qquad$ 14. $3-7 i$ $\qquad$ 15. $-2+i$
16. 9 $\qquad$ 17. - -3 i $\qquad$ 18. -1 - i

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i$ $\qquad$ 14. $3-7 i$ $\qquad$ 15. $-2+i$
16. 9 $\qquad$ 17. - -3 i $\qquad$ 18. -1 - i

If $k$ represents any real number,

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i$ $\qquad$ 14. 3-7i $\qquad$ 15. $-2+i$
16. 9 $\qquad$ 17. -3i $\qquad$ 18. -1 -i

If $\mathbf{k}$ represents any real number, the additive inverse of $\mathbf{k}$,

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i$ $\qquad$ 14. 3-7i $\qquad$ 15. $-2+i$
16. 9 $\qquad$ 17. -3i $\qquad$ 18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k$

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i$ $\qquad$ 14. 3-7i $\qquad$ 15. $-2+i$
16. 9 $\qquad$ 17. -3i $\qquad$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i$ $\qquad$ 14. 3-7i $\qquad$ 15. $-2+i$
16. 9 $\qquad$ 17. -3i $\qquad$ 18. -1 -i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i$ $\qquad$ 14. $3-7 i$ $\qquad$ 15. $-2+i$
16. 9 $\qquad$ 17. - -3 i $\qquad$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i$
16. 9 $\qquad$ 17. -3i $\qquad$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i$
$-(6+8 i)=$
16. 9 $\qquad$ 17. -3i $\qquad$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i$
$-(6+8 i)=-1(6+8 i)$
14. $3-7 i$ $\qquad$ 15. $-2+i$
18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i-6$
$-(6+8 i)=-1(6+8 i)$
14. $3-7 i$ $\qquad$ 15. $-2+i$
18. -1 - i $\qquad$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \underline{-6-8 i}$
$-(6+8 i)=-1(6+8 i)$
16. 9
17. - -3 i
18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \quad-6-8 i$
$-(6+8 i)=-1(6+8 i)$
16. 9
17. - -3 i
18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.

$$
\begin{aligned}
& \text { 13. } 6+8 i \underline{-6-8 i} \\
& -(6+8 i)=-1(6+8 i)
\end{aligned}
$$

14. $3-7 i$
15. $-2+i$
16. -1 - i $\qquad$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i-6-8 i$
$-(6+8 i)=-1(6+8 i)$
14. $3-7 i$
$-(3-7 i)=$
16. 9 $\qquad$ 17. - $-3 i$
18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i-6-8 i$
$-(6+8 i)=-1(6+8 i)$
14. $3-7 i$
$-(3-7 i)=-1(3-7 i)$
16. 9 $\qquad$ 17. - -3 i
18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \underline{-6-8 i}$
$-(6+8 i)=-1(6+8 i)$
14. $3-7 i \quad-3$
$-(3-7 i)=-1(3-7 i)$
16. 9 $\qquad$ 17. - -3 i $\qquad$ 18. -1 - i

If $k$ represents any real number, the additive inverse of $k$, $-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \quad-6-8 i$
14. $\mathbf{3 - 7 i}-3+7 \mathbf{i}$
$-(6+8 i)=-1(6+8 i) \quad-(3-7 i)=-1(3-7 i)$
15. $-2+i$
16. 9
17. - -3 i
18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \underline{-6-8 i}$
$-(6+8 i)=-1(6+8 i)$

$$
\begin{aligned}
& \text { 14. } 3-7 i \quad-3+7 i \\
& -(3-7 i)=-1(3-7 i)
\end{aligned}
$$

$$
\text { 15. }-2+i
$$

16. 9
17.     - -3 i
18.     - $-1-\mathrm{i}$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i-6-8 i$

$$
-(6+8 i)=-1(6+8 i) \quad-(3-7 i)=-1(3-7 i)
$$

16. 9
17.     - -3 i
18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.

$$
\begin{aligned}
& \text { 13. } 6+8 i-6-8 i \\
&-(6+8 i)=-1(6+8 i) \text { 14. } 3-7 i \\
&-(3-7 i)=-1(3-7 i)
\end{aligned}
$$

16. 9 $\qquad$

$$
\text { 17. }-3 i
$$

$\qquad$
17. - -3 i
15. $-2+i$

$$
-(-2+i)=
$$

18.     - $-1-\mathrm{i}$ $\qquad$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.

$$
\begin{aligned}
& \text { 13. } 6+8 i \underline{-6-8 i} \text { 14. } 3-7 i \underline{-3+7 i} \\
& -(6+8 i)=-1(6+8 i) \\
& -(3-7 i)=-1(3-7 i)
\end{aligned}
$$

$$
\text { 17. }-3 i
$$

$\qquad$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \underline{-6-8 i}$

$$
\text { 14. } 3-7 \mathbf{i}-3+7 i
$$

$$
-(6+8 \mathbf{i})=-1(6+8 \mathbf{i}) \quad-(3-7 \mathbf{i})=-1(3-7 \mathbf{i})
$$

15. $-2+i \quad 2$

$$
-(-2+i)=-1(-2+i)
$$

16. 9
17.     - -3 i
18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \underline{-6-8 i}$
14. $3-7 \mathbf{i}-3+7 \mathbf{i}$
$-(3-7 i)=-1(3-7 i)$

$$
\begin{aligned}
& \text { 15. }-2+i \frac{2-i}{-(-2+i)}=-1(-2+i)
\end{aligned}
$$

18. -1 - i $\qquad$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \quad-6-8 i$
$-(6+8 i)=-1(6+8 i)$

$$
-(3-7 \mathbf{i})=-1(3-7 \mathbf{i})
$$

15. $-2+\mathbf{i} \xrightarrow{2-i}$

$$
-(-2+i)=-1(-2+i)
$$

18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \quad-6-8 i$
$-(6+8 i)=-1(6+8 i)$
16. 9

$$
-(3-7 \mathbf{i})=-1(3-7 \mathbf{i})
$$

15. $-2+i \xrightarrow{2-i}$

$$
-(-2+i)=-1(-2+i)
$$

17. $-3 i$
18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \quad-6-8 i$
14. $3-7 \mathbf{i}-3+7 \mathbf{i}$
$-(3-7 i)=-1(3-7 i)$

$$
\begin{aligned}
& \text { 15. }-2+i \xlongequal{2-i} \\
& -(-2+i)=-1(-2+i)
\end{aligned}
$$

16. $9 \xrightarrow{-9}$
17. $-3 i$
18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \quad-6-8 i$
14. $3-7 \mathbf{i}-3+7 \mathbf{i}$

$$
-(3-7 \mathbf{i})=-1(3-7 \mathbf{i})
$$

$$
\begin{aligned}
& \text { 15. }-2+i \underline{2-i} \\
& -(-2+i)=-1(-2+i)
\end{aligned}
$$

16. 9 $\square$ 17. -3 i
17. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i-6-8 i$

$$
-(6+8 i)=-1(6+8 i)
$$

16. 9

17. $3-7 \mathbf{i}-3+7 \mathbf{i}$

$$
-(3-7 \mathbf{i})=-1(3-7 \mathbf{i})
$$

$$
\begin{aligned}
& \text { 15. }-2+i=2-i \\
& -(-2+i)=-1(-2+i)
\end{aligned}
$$

17. $-3 i$
18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \quad-6-8 i$
$-(6+8 i)=-1(6+8 i)$
16. 9

14. $3-7 \mathbf{i}-3+7 \mathbf{i}$

$$
-(3-7 \mathbf{i})=-1(3-7 \mathbf{i})
$$

15. $-2+i \quad 2-i$

$$
-(-2+i)=-1(-2+i)
$$

17. -3 i
$3 i$
18. -1 - i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i-6-8 i$
14. $3-7 \mathbf{i} \underline{\underline{-3+7 i}}$

$$
-(6+8 i)=-1(6+8 i)
$$

$$
\begin{aligned}
& \text { 15. }-2+i \xlongequal{2-i} \\
& -(-2+i)=-1(-2+i)
\end{aligned}
$$

16. 9


$$
-(3-7 i)=-1(3-7 i)
$$

$$
\text { 17. }-3 i \quad 3 i
$$

18. -1-i

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i-6-8 i$
$-(6+8 i)=-1(6+8 i)$
16. 9


$$
-(3-7 \mathbf{i})=-1(3-7 \mathbf{i})
$$

15. $-2+i \xrightarrow{2-i}$

$$
-(-2+i)=-1(-2+i)
$$

17. -3 i $3 i$
18. -1-i $\qquad$

If $k$ represents any real number, the additive inverse of $k$, $-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \quad-6-8 i$

$$
-(6+8 i)=-1(6+8 i)
$$

$$
-(3-7 \mathbf{i})=-1(3-7 \mathbf{i})
$$

$$
\begin{aligned}
& \text { 15. }-2+i \xlongequal{2-i} \\
& -(-2+i)=-1(-2+i)
\end{aligned}
$$

16. 9

17. $-3 i$ $3 i$
18. $-1-\mathrm{i}$ $\qquad$

$$
-(-1-i)=
$$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \quad-6-8 i$

$$
-(6+8 i)=-1(6+8 i)
$$

$$
-(3-7 \mathbf{i})=-1(3-7 \mathbf{i})
$$

$$
\begin{aligned}
& \text { 15. }-2+i \xlongequal[2-i]{-(-2+i)=} \begin{array}{l}
-1(-2+i)
\end{array} \\
& -(-2+i
\end{aligned}
$$

16. 9

17. $-3 i$ $3 i$
18. $-1-\mathbf{i}$


$$
-(-1-i)=-1(-1-i)
$$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \quad-6-8 i$

$$
-(6+8 i)=-1(6+8 i)
$$

$$
-(3-7 \mathbf{i})=-1(3-7 \mathbf{i})
$$

$$
\begin{aligned}
& \text { 15. }-2+i \xlongequal[2-i]{-(-2+i)=-1(-2+i)}
\end{aligned}
$$

16. 9

17. $-3 i$ $3 i$
18. $-1-\mathrm{i} \quad 1$

$$
-(-1-i)=-1(-1-i)
$$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \underline{-6-8 i}$
$-(6+8 i)=\mathbf{- 1}(6+8 i)$

$$
-(3-7 i)=-1(3-7 i)
$$

$$
\begin{aligned}
& \text { 15. }-2+i \xlongequal{2-i}=-(-2+i)=-1(-2+i)
\end{aligned}
$$

16. 9

17.     - -3 i $3 i$

$$
\begin{aligned}
& \text { 18. }-1-i \frac{1+i}{-(-1-i)}=-1(-1-i)
\end{aligned}
$$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \underline{-6-8 i}$
14. $3-7 \mathbf{i} \underline{\underline{-3+7 i}}$

$$
\text { 15. }-2+i \xlongequal{2-i}
$$

16. 9

17.     - -3 i $3 i$

$$
\text { 18. } \begin{array}{rl}
-1-i & 1+i \\
-(-1-i) & =-1(-1-i)
\end{array}
$$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Find the additive inverse (opposite) of each of the following.
13. $6+8 i \quad-6-8 i$
$-(6+8 i)=-1(6+8 i)$

$$
-(3-7 \mathbf{i})=-1(3-7 \mathbf{i})
$$

$$
\begin{aligned}
& \text { 15. }-2+i=2-i \\
& -(-2+i)=-1(-2+i)
\end{aligned}
$$

16. 9

17. $-3 i$ $3 i$
18. $-\mathbf{1 - i}-1+i$

$$
-(-1-i)=-1(-1-i)
$$

If $k$ represents any real number, the additive inverse of $k,-k=-1 k$. The same property holds for complex numbers.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=$ $\qquad$ 20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=$ $\qquad$ 20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=$ $\qquad$ 20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 \mathbf{i})+(-3-5 i)=$ $\qquad$

When writing a complex number in a+biform,

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=$ $\qquad$ 20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 \mathbf{i})+(-3-5 i)=$ $\qquad$

When writing a complex number in $\underline{a}+\mathbf{b i}$ form, if $\underline{b}$ is a negative number,

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=$ $\qquad$ 20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When writing a complex number in $\underline{a+b i}$ form, if $\underline{b}$ is a negative number, it is customary to avoid the double sign.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=$ $\qquad$ 20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When writing a complex number in $\underline{\mathbf{a}+\mathbf{b}} \mathbf{f o r m}$, if $\underline{\mathbf{b}}$ is a negative number, it is customary to avoid the double sign. For example, $3+-2 i$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=$ $\qquad$ 20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When writing a complex number in $\underline{\mathbf{a}+\mathbf{b}} \mathbf{f o r m}$, if $\underline{\mathbf{b}}$ is a negative number, it is customary to avoid the double sign. For example, $3+-2 i$ is written as $3-2 i$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=$ $\qquad$ 20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=$ $\qquad$ 20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers,

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=$ $\qquad$ 20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=$ $\qquad$ 20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$
$\qquad$
22. $(9-7 \mathbf{i})+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 \mathbf{i})+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 \mathbf{i})+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 \mathbf{i})+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 \mathbf{i})+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$ 20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=6$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=6$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=6+0 i$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number ilike a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=$ $\qquad$ 22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number ilike a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=1$
22. $(9-7 \mathbf{i})+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number ilike a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=1$
22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number ilike a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=\underline{1-7 i} \quad 22 .(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number ilike a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=\underline{1-7 i}$
22. $(9-7 i)+(-3-5 i)=$ $\qquad$

When adding complex numbers, treat the number ilike a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i} \quad$ 20. $(7-3 i)+(-1+3 i)=\underline{6}$
21. $(-3-8 i)+(4+i)=\underline{1-7 i}$
22. $(9-7 i)+(-3-5 i)=$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=$ $\qquad$
21. $(-3-8 i)+(4+i)=\underline{1-7 i}$
22. $\underset{\uparrow}{(9-7 \mathbf{i})}+\underset{\uparrow}{(-3-5 i)}=$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i} \quad$ 20. $(7-3 i)+(-1+3 i)=\underline{6}$
21. $(-3-8 i)+(4+i)=\underline{1-7 i}$
22. $(9-7 i)+(-3-5 i)=6$

When adding complex numbers, treat the number ilike a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i} \quad$ 20. $(7-3 i)+(-1+3 i)=\underline{6}$
21. $(-3-8 i)+(4+i)=\underline{1-7 i}$
22. $(9-7 i)+(-3-5 i)=6$

When adding complex numbers, treat the number ilike a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i} \quad$ 20. $(7-3 i)+(-1+3 i)=\underline{6}$
21. $(-3-8 i)+(4+i)=\underline{1-7 i}$
22. $(9-7 i)+(-3-5 i)=6-12 i$

When adding complex numbers, treat the number ilike a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i} \quad$ 20. $(7-3 i)+(-1+3 i)=\underline{6}$
21. $(-3-8 i)+(4+i)=\underline{1-7 i}$
22. $(9-7 i)+(-3-5 i)=6-12 i$

When adding complex numbers, treat the number i like a variable and simply add like terms.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
19. $(3+7 i)+(5+2 i)=\underline{8+9 i}$
20. $(7-3 i)+(-1+3 i)=$ $\square$
21. $(-3-8 i)+(4+i)=$ $1-7 i$
22. $(9-7 i)+(-3-5 i)=\underline{6-12 i}$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=$ $\qquad$ 24. $(8+3 i)-(5+6 i)=$ $\qquad$
25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=$ $\qquad$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=$ $\qquad$ 24. $(8+3 i)-(5+6 i)=$ $\qquad$
25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers,

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=$ $\qquad$ 24. $(8+3 i)-(5+6 i)=$ $\qquad$
25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=$ $\qquad$ 24. $(8+3 i)-(5+6 i)=$ $\qquad$
25. $(5-\mathbf{i})-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $P-Q=P+-Q$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=$ $\qquad$ 24. $(8+3 i)-(5+6 i)=$ $\qquad$
25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=$ $=(2+8 i)$
25. $(5-i)-(5-7 i)=$ $\qquad$
24. $(8+3 i)-(5+6 i)=$ $\qquad$
$\square$
26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $P-Q=P+-Q$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=$

$$
=(2+8 i)+
$$

25. $(5-i)-(5-7 i)=$ $\qquad$
26. $(8+3 i)-(5+6 i)=$ $\qquad$
27. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $P-Q=P+-Q$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=$
$=(2+8 i)+(-5-3 i)$
25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$
24. $(8+3 i)-(5+6 i)=$ $\qquad$
26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $P-Q=P+-Q$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=$
$=(2+8 i)+(-5-3 i)=$
25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$
24. $(8+3 i)-(5+6 i)=$ $\qquad$
26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $P-Q=P+-Q$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=$
$=(2+8 i)+(-5-3 i)=$

25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$
24. $(8+3 i)-(5+6 i)=$ $\qquad$
26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=-3$
$=(2+8 i)+(-5-3 i)=$

25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$
24. $(8+3 i)-(5+6 i)=$ $\qquad$
26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=-3$
$=(2+8 i)+(-5-3 i)=$
$\uparrow$
25. $(5-i)-(5-7 i)=$ $\qquad$

24. $(8+3 i)-(5+6 i)=$ $\qquad$
26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $P-Q=P+-Q$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=-3+5 i$
$=(2+8 i)+(-5-3 i)=$
$\uparrow$
25. $(5-i)-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=\underline{-3+5 i}$
$=(2+8 i)+(-5-3 i)=$
25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$
24. $(8+3 i)-(5+6 i)=$ $\qquad$
26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+-\mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

25. $(5-\mathbf{i})-(5-7 i)=$ $\qquad$
26. $(8+3 i)-(5+6 i)=$ $\qquad$
$\square$
27. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

25. $(5-\mathbf{i})-(5-7 i)=$ $\qquad$

$$
\text { 24. } \begin{aligned}
& (8+3 i)-(5+6 i)= \\
= & (8+3 i)
\end{aligned}
$$

26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

25. $(5-\mathbf{i})-(5-7 i)=$ $\qquad$

$$
\text { 24. } \begin{aligned}
& (8+3 i)-(5+6 i)= \\
= & (8+3 i)+
\end{aligned}
$$

26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

25. $(5-\mathbf{i})-(5-7 i)=$ $\qquad$

$$
\text { 24. } \begin{aligned}
& (8+3 i)-(5+6 i)= \\
= & (8+3 i)+(-5-6 i)
\end{aligned}
$$

$\qquad$
26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

$$
\text { 24. }(8+3 i)-(5+6 i)=
$$

$$
=(8+3 i)+(-5-6 i)=
$$ $\uparrow$

25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+-\mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. }(2+8 i)-(5+3 i)=-3+5 i
$$

$$
\text { 24. }(8+3 i)-(5+6 i)=3
$$

$$
=(8+3 i)+(-5-6 i)=
$$

$$
\uparrow
$$

25. $(5-\mathbf{i})-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $P-Q=P+-Q$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. }(2+8 i)-(5+3 i)=-3+5 i
$$

$$
\text { 24. }(8+3 i)-(5+6 i)=\underline{3}
$$

$$
\begin{gathered}
(8+\underset{\uparrow}{3 i})+(-5-6 i) \\
\uparrow
\end{gathered}
$$

25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $P-Q=P+-Q$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

25. $(5-\mathbf{i})-(5-7 i)=$ $\qquad$

$$
\begin{aligned}
& \text { 24. } \left.\begin{array}{l}
(8+3 i)-(5+6 i)=3-3 i \\
=(8+3 i)+(-5-6 i)= \\
\uparrow
\end{array}\right) .
\end{aligned}
$$

26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $P-Q=P+-Q$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-\underline{-3+5 i} \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

25. $(5-\mathbf{i})-(5-7 i)=$ $\qquad$

$$
\begin{aligned}
& \text { 24. }(8+3 i)-(5+6 i)=3-3 i \\
& =(8+3 i)+(-5-6 i)=
\end{aligned}
$$

26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

$$
\text { 25. }(5-i)-(5-7 i)=
$$

$\qquad$
24. $(8+3 i)-(5+6 i)=3-3 i$

$$
=(8+3 \mathbf{i})+(-5-6 \mathbf{i})=
$$

26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

$$
\text { 24. }(8+3 i)-(5+6 i)=3-3 i
$$

$$
=(8+3 i)+(-5-6 i)=
$$

25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+-\mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

$$
\text { 24. }(8+3 i)-(5+6 i)=3-3 i
$$

$$
=(8+3 i)+(-5-6 i)=
$$

25. $(5-\mathrm{i})-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

$$
\text { 25. }(5-i)-(5-7 i)=
$$

$\qquad$

$$
=(5-i)+(-5+7 i)
$$

24. $(8+3 i)-(5+6 i)=\underline{3-3 i}$

$$
=(8+3 i)+(-5-6 i)=
$$

26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+-\mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

$$
\text { 25. }(5-i)-(5-7 i)=
$$

$\qquad$

$$
=(5-i)+(-5+7 i)=
$$

$$
\uparrow \quad \uparrow
$$

24. $(8+3 i)-(5+6 i)=3-3 i$

$$
=(8+3 i)+(-5-6 i)=
$$

26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

$$
\text { 25. }(5-i)-(5-7 i)=\underline{0}
$$

$$
=(5-i)+(-5+7 i)=
$$

$$
\uparrow \quad \uparrow
$$

24. $(8+3 i)-(5+6 i)=3-3 i$

$$
=(8+3 \mathbf{i})+(-5-6 \mathbf{i})=
$$

26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

$$
\text { 25. }(5-i)-(5-7 i)=\underline{0}
$$

$$
=(5-i)+(-5+7 i)=
$$


24. $(8+3 i)-(5+6 i)=3-3 i$

$$
=(8+3 i)+(-5-6 i)=
$$

26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

$$
\text { 25. }(5-i)-(5-7 i)=\underline{0}+6 i
$$

$$
=(5-i)+(-5+7 i)=
$$


24. $(8+3 i)-(5+6 i)=3-3 i$

$$
=(8+3 \mathbf{i})+(-5-6 \mathbf{i})=
$$

26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 23. } \begin{aligned}
& (2+8 i)-(5+3 i)=-3+5 i \\
= & (2+8 i)+(-5-3 i)=
\end{aligned}
$$

$$
\text { 25. }(5-i)-(5-7 i)=
$$

$\square$

$$
=(5-i)+(-5+7 i)=
$$

24. $(8+3 i)-(5+6 i)=3-3 i$

$$
=(8+3 \mathbf{i})+(-5-6 \mathbf{i})=
$$

26. $(4-6 i)-(-8+5 i)=$ $\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=-3+5 i$

$$
\text { 24. } \begin{aligned}
&(8+3 i)-(5+6 i)=3-3 i \\
&=(8+3 i)+(-5-6 i)=
\end{aligned}
$$

25. $(5-\mathbf{i})-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=$

$$
=(5-i)+(-5+7 i)=
$$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

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=(8+3 i)+(-5-6 i)=
\end{aligned}
$$

25. $(5-\mathrm{i})-(5-7 \mathrm{i})=$


$$
\text { 26. } \begin{aligned}
& (4-6 i)-(-8+5 i)= \\
= & (4-6 i)
\end{aligned}
$$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

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\end{aligned}
$$

25. $(5-\mathrm{i})-(5-7 \mathrm{i})=$


$$
\text { 26. } \begin{aligned}
& (4-6 \mathbf{i})-(-8+5 \mathbf{i})= \\
= & (4-6 \mathbf{i})+
\end{aligned}
$$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+-\mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
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\end{aligned}
$$

25. $(5-\mathrm{i})-(5-7 \mathrm{i})=$

$=(5-i)+(-5+7 i)=$

$$
\text { 26. } \begin{aligned}
& (4-6 i)-(-8+5 i)= \\
= & (4-6 i)+(8-5 i)
\end{aligned}
$$

When subtracting complex numbers, change the subtraction to addition. $P-Q=P+-Q$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=-3+5 i$

$$
=(2+8 i)+(-5-3 i)=
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(8+3 i)-(5+6 i) & =3-3 i \\
=(8+3 i)+(-5-6 i) & =
\end{aligned}
$$

25. $(5-\mathbf{i})-(5-7 i)=$


$$
=(5-i)+(-5+7 i)=
$$


$\qquad$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

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=(8+3 i)+(-5-6 i)=
\end{aligned}
$$

25. $(5-\mathrm{i})-(5-7 \mathrm{i})=$ $\qquad$

$$
=(5-i)+(-5+7 i)=
$$

$$
\text { 26. } \begin{aligned}
(4-6 i)-(-8+5 i) & =12 \\
=(4-6 i) & (8-5 i)= \\
& \uparrow
\end{aligned}
$$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=-3+5 i$

$$
=(2+8 i)+(-5-3 i)=
$$

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\text { 24. } \begin{aligned}
& (8+3 i)-(5+6 i)=3-3 i \\
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$$

25. $(5-\mathbf{i})-(5-7 i)=$ $\qquad$

$$
=(5-i)+(-5+7 i)=
$$

$$
\text { 26. } \begin{aligned}
&(4-6 i)-(-8+5 i)=12 \\
&=(4-6 i)+(8-5 i)= \\
& \uparrow
\end{aligned}
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When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

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= & (8+3 i)+(-5-6 i)=
\end{aligned}
$$

25. $(5-\mathrm{i})-(5-7 \mathrm{i})=$ $\qquad$

$$
\text { 26. } \begin{aligned}
&(4-6 i)-(-8+5 i)=12-11 i \\
&=(4-6 i)+(8-5 i)= \\
& \uparrow
\end{aligned}
$$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

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& (8+3 i)-(5+6 i)=3-3 i \\
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When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{-} \mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
23. $(2+8 i)-(5+3 i)=\underline{-3+5 i}$

$$
\text { 24. } \begin{aligned}
& (8+3 i)-(5+6 i)=3-3 i \\
= & (8+3 i)+(-5-6 i)=
\end{aligned}
$$ $=(2+8 i)+(-5-3 i)=$

25. $(5-\mathbf{i})-(5-7 i)=$ $\qquad$ 26. $(4-6 i)-(-8+5 i)=12-11 i$
$=(5-i)+(-5+7 i)=$
$=(4-6 i)+(8-5 i)=$

When subtracting complex numbers, change the subtraction to addition. $\mathbf{P}-\mathbf{Q}=\mathbf{P}+\mathbf{Q}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
27. $5(3+2 i)=$ $\qquad$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
28. $-3(4-7 i)=$ $\qquad$
30. $-5 i(6+4 i)=$ $\qquad$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
27. $5(3+2 i)=$ $\qquad$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
28. $-3(4-7 i)=$ $\qquad$
30. $-5 i(6+4 i)=$ $\qquad$

When multiplying complex numbers,

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
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29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
28. $-3(4-7 \mathbf{i})=$ $\qquad$
30. $-5 i(6+4 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
27. $5(3+2 i)=$ $\qquad$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
28. $-3(4-7 i)=$ $\qquad$
30. $-5 i(6+4 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
27. $5(3+2 i)=$ $\qquad$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
28. $-3(4-7 i)=$ $\qquad$
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When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer,

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## Algebra II Class Worksheet \#4 Unit 5

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28. $-3(4-7 i)=$ $\qquad$
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When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}$,

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29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
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Perform the indicated operations. Express complex answers in a + bi form.
27. $5(3+2 i)=$ -
$\qquad$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
28. $-3(4-7 i)=$ $\qquad$
30. $-5 i(6+4 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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Perform the indicated operations. Express complex answers in a + bi form.

29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
28. $-3(4-7 i)=$ $\qquad$
30. $-5 i(6+4 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
27. $5(3+2 i)=15$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
28. $-3(4-7 i)=$ $\qquad$
30. $-5 i(6+4 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
27. $5(3+2 i)=\underline{15+10 i}$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
28. $-3(4-7 i)=$ $\qquad$
30. $-5 i(6+4 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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27. $5(3+2 i)=\underline{15+10 i}$
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When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

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27. $5(3+2 i)=\underline{15+10 i}$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
28. $-3(4-7 \mathbf{i})=$ -
30. $-5 i(6+4 i)=$ $\qquad$

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27. $5(3+2 i)=\underline{15+10 i}$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
28. $-3(4-7 \mathrm{i})=-12$
-
30. $-5 i(6+4 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

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27. $5(3+2 i)=\underline{15+10 i}$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
28. $-3(4-7 i)=-12+21 i$
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When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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28. $-3(4-7 i)=\underline{-12+21 i}$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$ 30. $-5 i(6+4 i)=$ $\qquad$

$$
=4 \mathbf{i}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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27. $5(3+2 i)=\underline{15+10 i}$
28. $-3(4-7 i)=\underline{-12+21 i}$
29. $2 \mathbf{i}(2+3 i)=$ $\qquad$ 30. $-5 i(6+4 i)=$ $\qquad$

$$
=4 \mathbf{i}+6 \mathbf{i}^{2}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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27. $5(3+2 i)=\underline{15+10 i}$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
$=4 i+6 i^{2}=$
28. $-3(4-7 i)=\underline{-12+21 i}$
30. $-5 i(6+4 i)=$ $\qquad$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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27. $5(3+2 i)=\underline{15+10 i}$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$ $\qquad$
$=4 i+6 i^{2}=4 i$
28. $-3(4-7 i)=-12+21 i$
30. $-5 i(6+4 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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27. $5(3+2 i)=\underline{15+10 i}$
29. $2 \mathbf{i}(2+3 \mathbf{i})=$

$$
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When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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Perform the indicated operations. Express complex answers in a + bi form.
27. $5(3+2 i)=\underline{15+10 i}$
29. $2 i(2+3 i)=-6$
$=4 i+6 i^{2}=4 i-6=$
28. $-3(4-7 i)=-12+21 i$
30. $-5 i(6+4 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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27. $5(3+2 i)=\underline{15+10 i}$
29. $2 i(2+3 i)=\underline{-6+4 i}$
$=4 i+6 i^{2}=4 i-6=$
28. $-3(4-7 i)=-12+21 i$
30. $-5 i(6+4 i)=$ $\qquad$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
27. $5(3+2 i)=\underline{15+10 i}$
29. $2 i(2+3 i)=\underline{-6+4 i}$ $=4 i+6 i^{2}=4 i-6=$
28. $-3(4-7 i)=-12+21 i$

$$
\text { 30. } \begin{gathered}
-5 i(6+4 i)= \\
=
\end{gathered}
$$

$\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $\mathbf{i}=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

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27. $5(3+2 i)=\underline{15+10 i}$
29. $2 i(2+3 i)=\underline{-6+4 i}$ $=4 i+6 i^{2}=4 i-6=$
28. $-3(4-7 i)=-12+21 i$

$$
\text { 30. } \begin{gathered}
-5 i(6+4 i)= \\
L \\
=-30 i
\end{gathered}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $\mathbf{i}=\sqrt{-1}, i^{2}=-1$.

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28. $-3(4-7 i)=-12+21 i$

$$
\text { 30. } \begin{gathered}
-5 i(6+4 i) \\
=-30 i
\end{gathered}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $\mathbf{i}=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

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29. $2 i(2+3 i)=\underline{-6+4 i}$ $=4 i+6 i^{2}=4 i-6=$
28. $-3(4-7 i)=-12+21 i$

$$
\text { 30. } \left.\begin{array}{rl}
-5 i(6+4 i) \\
=-30 i-20 i^{2}
\end{array}\right)=
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

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28. $-3(4-7 i)=-12+21 i$
30. $-5 i(6+4 i)=$ $\qquad$

$$
=-30 i-20 i^{2}=
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

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28. $-3(4-7 i)=-12+21 i$
30. $-5 i(6+4 i)=$

$$
=-30 i-20 i^{2}=-30 i
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

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$=4 i+6 i^{2}=4 i-6=$
28. $-3(4-7 i)=-12+21 i$
30. $-5 i(6+4 i)=$
$=-\mathbf{3 0} i-20 i^{2}=-\mathbf{3 0 i}$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 .

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28. $-3(4-7 i)=-12+21 i$
30. $-5 i(6+4 i)=$

$$
=-30 i-20 i^{2}=-30 i+20
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

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$=4 i+6 i^{2}=4 i-6=$
28. $-3(4-7 i)=-12+21 i$

$$
\text { 30. } \begin{aligned}
& -5 i(6+4 i)= \\
= & -30 i-20 i^{2}=-30 i+20=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

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27. $5(3+2 i)=\underline{15+10 i}$
29. $2 i(2+3 i)=\underline{-6+4 i}$
$=4 i+6 i^{2}=4 i-6=$
28. $-3(4-7 i)=-12+21 \mathrm{i}$

$$
\text { 30. } \begin{aligned}
& -5 i(6+4 i)=20 \\
= & -30 i-20 i^{2}=-30 i+20=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

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27. $5(3+2 i)=\underline{15+10 i}$
29. $2 i(2+3 i)=\underline{-6+4 i}$
$=4 i+6 i^{2}=4 i-6=$
28. $-3(4-7 i)=-12+21 \mathrm{i}$

$$
\text { 30. } \begin{aligned}
&-5 i(6+4 i)=\underline{20-30 i} \\
&=-30 i-20 i^{2}=-30 i+20=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

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$=4 i+6 i^{2}=4 i-6=$
28. $-3(4-7 i)=-12+21 i$

$$
\text { 30. } \begin{aligned}
& -5 i(6+4 i)=\underline{20-30 i} \\
= & -30 i-20 i^{2}=-30 i+20=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

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Perform the indicated operations. Express complex answers in a + bi form.
27. $5(3+2 i)=\underline{15+10 i}$ 28. $-3(4-7 i)=-12+21 i$
29. $2 i(2+3 i)=\underline{-6+4 i}$
$=4 i+6 i^{2}=4 i-6=$

$$
\text { 30. } \begin{aligned}
& -5 i(6+4 i)=\underline{20-30 i} \\
=- & -30 i-20 i^{2}=-30 i+20=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=$ $\qquad$
33. $(7-3 i)(2-5 i)=$ $\qquad$ 34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=$ $\qquad$
33. $(7-3 i)(2-5 i)=$ $\qquad$ 34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$\qquad$
=
33. $(7-3 i)(2-5 i)=$ $\qquad$
32. $(3-7 i)(1+4 i)=$ $\qquad$
34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

## 31. $(2+3 i)(5+i)=$ <br> $=10$

33. $(7-3 i)(2-5 i)=$ $\qquad$
$\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=$
$=10$
33. $(7-3 i)(2-5 i)=$ $\qquad$ 34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

33. $(7-3 i)(2-5 i)=$ $\qquad$
32. $(3-7 i)(1+4 i)=$ $\qquad$
34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$=10+2 i$
33. $(7-3 i)(2-5 i)=$ $\qquad$
32. $(3-7 i)(1+4 i)=$ $\qquad$
34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. } \begin{aligned}
& (2+3 i)(5+i) \\
= & \text { ( } 10+2 i+15 i
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$
34. $(3-7 i)(1+4 i)=$ $\qquad$
35. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$=10+\mathbf{2 i}+\mathbf{1 5 i}$
33. $(7-3 i)(2-5 i)=$ $\qquad$
32. $(3-7 i)(1+4 i)=$ $\qquad$
34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. } \begin{aligned}
(2+3 i) & (5+i) \\
= & 10+2 i+15 i
\end{aligned}+3 i^{2}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$
34. $(3-7 i)(1+4 i)=$ $\qquad$
35. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=$ $\qquad$
$=10+\mathbf{i}+\mathbf{1 5 i}+3 i^{2}=$
33. $(7-3 i)(2-5 i)=$ $\qquad$ 34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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Perform the indicated operations. Express complex answers in a + bi form.

33. $(7-3 i)(2-5 i)=$ $\qquad$
32. $(3-7 i)(1+4 i)=$ $\qquad$
34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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Perform the indicated operations. Express complex answers in a + bi form.

33. $(7-3 i)(2-5 i)=$ $\qquad$
32. $(3-7 i)(1+4 i)=$ $\qquad$
34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 .

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

33. $(7-3 i)(2-5 i)=$ $\qquad$
32. $(3-7 i)(1+4 i)=$ $\qquad$
34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 31. }(2+3 i)(5+i)=\underline{7} \\
& =10+2 i+15 i+3 i^{2}=
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$
34. $(3-7 i)(1+4 i)=$ $\qquad$
35. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. } \begin{gathered}
(2+3 i)(5+i)= \\
\downarrow \\
=10+2 i+15 i+3 i^{2}=
\end{gathered}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$
34. $(3-7 i)(1+4 i)=$ $\qquad$
35. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{i}+\mathbf{1 5 i}+3 i^{2}=$
33. $(7-3 i)(2-5 i)=$ $\qquad$
32. $(3-7 i)(1+4 i)=$ $\qquad$
34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=\underline{7+17 i}$
$=10+\mathbf{i}+\mathbf{1 5 i}+3 i^{2}=$
33. $(7-3 i)(2-5 i)=$ $\qquad$
32. $(3-7 i)(1+4 i)=$ $\qquad$
34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 31. } \begin{aligned}
&(2+3 i)(5+i)= \\
&= 10+2 i+17 i \\
& i n i+3 i^{2}=
\end{aligned}
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$

$$
\text { 32. } \quad\left(\begin{array}{l}
(3-7 i)(1+4 i) \\
= \\
=
\end{array}\right.
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 31. } \begin{aligned}
& (2+3 i)(5+i)=-17+17 \\
= & 10+2 i+15 i+3 i^{2}=
\end{aligned}
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$

$$
\text { 32. } \begin{aligned}
&(3-7 i)(1+4 i)= \\
&= 3
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 31. }(2+3 i)(5+i)=\underline{7+17 i} \\
& =10+2 i+15 i+3 i^{2}=
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$

$$
\text { 32. } \begin{aligned}
&(3-7 i)(1+4 i) \\
&= \\
&=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 31. }(2+3 i)(5+i)=1+17 i \\
& =10+2 i+15 i+3 i^{2}=
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)= \\
& =3+12 i
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 31. } \begin{array}{l}
(2+3 i)(5+i)=-1+17 i \\
=10+2 i+15 i+3 i^{2}=
\end{array} .
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\text {. } \\
= & 3+12 i
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 31. }(2+3 i)(5+i)=-1+17 i \\
& =10+2 i+15 i+3 i^{2}=
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)= \\
= & 3+12 i-7 i
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 31. }(2+3 i)(5+i)=-1+17 i \\
& =10+2 i+15 i+3 i^{2}=
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)= \\
= & (3+12 i-7 i
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 31. }(2+3 i)(5+i)=-1+17 i \\
& =10+2 i+15 i+3 i^{2}=
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i \\
= & \\
= & 3+12 i-7 i-28 i^{2}
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=\underline{7+17 i}$
$=10+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=$ $\qquad$
32. $(3-7 i)(1+4 i)=$
$=3+12 i-7 i-28 i^{2}=$
34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. } \begin{aligned}
& (2+3 i)(5+i)=\underline{7+17 i} \\
= & 10+2 i+15 i+3 i^{2}=
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$

$$
\text { 32. } \begin{aligned}
&(3-7 i)(1+4 i)= \\
& \downarrow \\
&= 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. } \begin{aligned}
& (2+3 i)(5+i)=-1+17 i \\
= & 10+2 i+15 i+3 i^{2}=
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$

$$
\text { 32. } \begin{aligned}
&(3-7 i)(1+4 i)= \\
& \downarrow \\
&= 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
\text { 31. } & (2+3 i)(5+i)=\underline{7+17 i} \\
= & 10+2 i+15 i+3 i^{2}=
\end{aligned}
$$

32. $(3-7 i)(1+4 i)=31$

$$
=3+12 i-7 i-28 i^{2}=
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$
35. $(7-3 i)(2-5 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 .

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 31. }(2+3 i)(5+i)=\underline{7+17 i} \\
&=10+2 i+15 i+3 i^{2}=
\end{aligned}
$$

$$
\text { 32. } \begin{gathered}
(3-7 i)(1+4 i)=31 \\
\downarrow \\
\downarrow \\
=3+12 i-7 i-28 i^{2}=
\end{gathered}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$ 34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. } \begin{aligned}
& (2+3 i)(5+i)=\underline{7+17 i} \\
= & 10+2 i+15 i+3 i^{2}=
\end{aligned}
$$

32. $(3-7 i)(1+4 i)=31+5 i$

$$
=3+12 i-7 i-28 i^{2}=
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$ 34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. } \begin{aligned}
& (2+3 i)(5+i)=\underline{7+17 i} \\
= & 10+2 i+15 i+3 i^{2}=
\end{aligned}
$$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

33. $(7-3 i)(2-5 i)=$ $\qquad$ 34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{i}+\mathbf{1 5 i}+3 i^{2}=$
33. $(7-3 i)(2-5 i)=$ $\qquad$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=\mathbf{1 0}+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=$ $=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=\underline{7+17 i}$
$=10+\mathbf{i}+\mathbf{1 5 i}+3 i^{2}=$
33. $(7-3 i)(2-5 i)=$ $=14$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.


$$
=10+2 i+15 i+3 i^{2}=
$$

33. $(7-3 i)(2-5 i)=$ $=14$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{i}+\mathbf{1 5 i}+3 i^{2}=$
33. $(7-3 i)(2-5 i)=$ $=14-35 i$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{i}+\mathbf{1 5 i}+3 i^{2}=$
33. $(7-3 i)(2-5 i)=$ $=14-35 i$
32. $(3-7 i)(1+4 i)=31+5 i$

$$
=3+12 i-7 i-28 i^{2}=
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=\underline{7+17 i}$
$=\mathbf{1 0}+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=$ -$=14-35 i-6 i$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$=10+2 i+15 i+3 i^{2}=$
33. $(7-3 i)(2-5 i)=$ $=14-35 i-6 i$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=7+17 i$
$=\mathbf{1 0}+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=$ $=14-35 i-6 i+15 i^{2}$
32. $(3-7 i)(1+4 i)=31+5 i$

$$
=3+12 i-7 i-28 i^{2}=
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{i}+\mathbf{1 5 i}+3 i^{2}=$
33. $(7-3 i)(2-5 i)=$ $\qquad$
$=14-35 i-6 i+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=\mathbf{1 0}+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=$ $=14-35 i-6 i+15 i^{2}=$
32. $(3-7 i)(1+4 i)=31+5 i$

$$
=3+12 i-7 i-28 i^{2}=
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=\mathbf{1 0}+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=$ $=14-35 i-6 i+15 i^{2}=$
32. $(3-7 i)(1+4 i)=31+5 i$

$$
=3+12 i-7 i-28 i^{2}=
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=\mathbf{1 0}+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$

32. $(3-7 i)(1+4 i)=31+5 i$

$$
=3+12 i-7 i-28 i^{2}=
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.


$$
=10+2 i+15 i+3 i^{2}=
$$


$=14-35 i-6 i+15 i^{2}=$
32. $(3-7 i)(1+4 i)=31+5 i$

$$
=3+12 \mathbf{i}-7 \mathbf{i}-28 \mathbf{i}^{2}=
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=\underline{7+17 i}$
$=10+\mathbf{i}+\mathbf{1 5 i}+3 i^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=14-35 i-6 i+15 i^{2}=$
32. $(3-7 i)(1+4 i)=31+5 i$

$$
=3+12 i-7 i-28 i^{2}=
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=\mathbf{1 0}+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=14-\mathbf{3 5 i}-6 i+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=14-35 i-6 i+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=\underline{7+17 i}$
$=10+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=\mathbf{1 4}-\mathbf{3 5 i} \mathbf{- 6 i}+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

$$
\text { 34. } \begin{aligned}
(1-8 i)(5+3 i) \\
= \\
=
\end{aligned}
$$

$\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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## Algebra II Class Worksheet \#4 Unit 5

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\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=14-35 i-6 i+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$

$$
=5
$$

$\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=14-35 i-6 i+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$

$$
=5
$$

$\qquad$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=14-35 i-6 i+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$

$$
=\mathbf{5}+\mathbf{3 i}
$$

$\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=\mathbf{1 4}-\mathbf{3 5 i} \mathbf{- 6 i}+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

$$
\text { 34. } \begin{aligned}
& (1-8 i)(5+3 i)= \\
& =5+3 i
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=14-35 i-6 i+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

$$
\text { 34. } \left.\begin{array}{rl}
(1-8 i)(5+3 i
\end{array}\right)=.
$$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=\mathbf{1 4}-\mathbf{3 5 i} \mathbf{- 6 i}+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

$$
\text { 34. } \begin{aligned}
(1-8 i)(5+3 i
\end{aligned} \underbrace{1}=.
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=\mathbf{1 0}+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=\mathbf{1 4}-\mathbf{3 5 i} \mathbf{- 6 i}+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

$$
\text { 34. } \begin{aligned}
(1-8 i)(5+3 i) & = \\
= & 5+3 i-40 i-24 i^{2}
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=\underline{7+17 i}$
$=10+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=\mathbf{1 4}-\mathbf{3 5 i} \mathbf{- 6 i}+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=$

$$
=5+3 i-40 i-24 i^{2}=
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=10+\mathbf{i}+\mathbf{1 5 i}+3 i^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=14-35 i-6 i+15 i^{2}=$

$$
\text { 32. } \left.\begin{array}{rl}
(3-7 i)(1+4 i)= \\
=31+5 i
\end{array}\right)
$$

$$
\text { 34. } \begin{aligned}
&(1-8 i)(5+3 i)= \\
& \downarrow \\
& \downarrow \downarrow+3 i-40 i-24 i^{2}=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 31. }(2+3 i)(5+i)=7+17 i
$$

$=\mathbf{1 0}+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=\mathbf{1 4}-\mathbf{3 5 i} \mathbf{- 6 i}+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

$$
\text { 34. } \begin{aligned}
& (1-8 i)(5+3 i)= \\
& \downarrow \\
= & 5+3 i-40 i-24 i^{2}=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$=10+2 i+15 i+3 i^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=14-35 i-6 i+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$



When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=\underline{7+17 i}$
$=\mathbf{1 0}+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=\mathbf{1 4}-\mathbf{3 5 i} \mathbf{- 6 i}+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

$$
\text { 34. } \begin{gathered}
(1-8 i)(5+3 i)=29 \\
\downarrow \\
=5+3 i-40 i-24 i^{2}=
\end{gathered}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=\underline{7+17 i}$
$=\mathbf{1 0}+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=\mathbf{1 4}-\mathbf{3 5 i} \mathbf{- 6 i}+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

$$
\text { 34. } \begin{aligned}
&(1-8 i)(5+3 i)=29-37 i \\
& \downarrow \\
&= 5+3 i-40 i-24 i^{2}=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=\underline{7+17 i}$
$=\mathbf{1 0}+\mathbf{2 i}+\mathbf{1 5 i}+3 \mathbf{i}^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=\mathbf{1 4}-\mathbf{3 5 i} \mathbf{- 6 i}+15 i^{2}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

$$
\text { 34. }(1-8 i)(5+3 i)=\underline{29-37 i}
$$

$$
=5+3 i-40 i-24 i^{2}=
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
31. $(2+3 i)(5+i)=\underline{7+17 i}$
$=10+2 i+15 i+3 i^{2}=$
33. $(7-3 i)(2-5 i)=-1-41 i$ $=\mathbf{1 4}-\mathbf{3 5 i} \mathbf{- 6 i}+\mathbf{1 5 i}^{\mathbf{2}}=$

$$
\text { 32. } \begin{aligned}
& (3-7 i)(1+4 i)=\underline{31+5 i} \\
= & 3+12 i-7 i-28 i^{2}=
\end{aligned}
$$

34. $(1-8 i)(5+3 i)=\underline{29-37 i}$ $=5+3 i-40 i-24 i^{2}=$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$
=
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $=64$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $=64$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$

$$
=64-40 i
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$
38. $(-2+i)(-2-i)=$ $\qquad$
39. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $=64-40 i$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$

$$
=64-40 i+40 i
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$
38. $(-2+i)(-2-i)=$ $\qquad$
39. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$
$=64-40 i+40 i$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$
$=64-40 i+40 i-25 i^{2}$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$

$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$
38. $(-2+i)(-2-i)=$ $\qquad$
39. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

$$
\text { Note: } \text { since } i=\sqrt{-1}, i^{2}=-1
$$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

$$
\text { Note: } \text { since } i=\sqrt{-1}, i^{2}=-1
$$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=\mathbf{8 9 + 0 i}$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$ 38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$

$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$
38. $(-2+i)(-2-i)=$ $\qquad$
39. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$ $=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\begin{aligned}
& \text { 36. }(-2+i)(-2-i)= \\
& =
\end{aligned}
$$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$ $=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\begin{aligned}
& \text { 36. }(-2+i)(-2-i)= \\
& =4
\end{aligned}
$$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35.

$$
\begin{aligned}
& (8+5 i)(8-5 i)=-\frac{89}{} \\
& =64-40 i+40 i-25 i^{2}=
\end{aligned}
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\text { 36. } \begin{aligned}
& (-2+i)(-2-i)= \\
& =4
\end{aligned}
$$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35.

$$
\begin{aligned}
& (8+5 i)(8-5 i)=-\frac{89}{} \\
& =64-40 i+40 i-25 i^{2}=
\end{aligned}
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\text { 36. } \begin{aligned}
& (-2+i)(-2-i)= \\
& =4+2 i
\end{aligned}
$$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$

$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\text { 36. } \begin{aligned}
& (-2+i)(-2-i)= \\
= & 4+2 i
\end{aligned}
$$

38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$

$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\text { 36. } \begin{aligned}
& (-2+i)(-2-i)=\text {. } \\
& =4+2 i-2 i
\end{aligned}
$$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35.

$$
\begin{aligned}
& (8+5 i)(8-5 i)=-\frac{89}{} \\
& =64-40 i+40 i-25 i^{2}=
\end{aligned}
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\text { 36. } \begin{gathered}
(-2+i)(-2-i)= \\
=4+2 i-2 i
\end{gathered}
$$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35.

$$
\begin{aligned}
& (8+5 i)(8-5 i)=-\frac{89}{} \\
& =64-40 i+40 i-25 i^{2}=
\end{aligned}
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\text { 36. } \begin{aligned}
& (-2+i)(-2-i)= \\
= & 4+2 i-2 i-i^{2}
\end{aligned}
$$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$

$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$
38. $(-2+i)(-2-i)=$

$$
=4+2 i-2 i-i^{2}=
$$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$ $=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$ $=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$ $=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$

$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\text { 36. } \begin{gathered}
(-2+i)(-2-i)=5 \\
\downarrow \downarrow \\
=4+2 i-2 i-i^{2}=
\end{gathered}
$$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$

$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\text { 36. } \begin{gathered}
(-2+i)(-2-i)=5+0 i \\
\downarrow \\
=4+2 i-2 i-i^{2}=
\end{gathered}
$$

38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$

$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\text { 36. } \begin{aligned}
& (-2+i)(-2-i)= \\
& =4+2 i-2 i-i^{2}=
\end{aligned}
$$

38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=5$ $=4+2 i-2 i-i^{2}=$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$
36. $(-2+i)(-2-i)=$ $\qquad$ $=4+2 i-2 i-i^{2}=$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $=12$
36. $(-2+i)(-2-i)=5$ $=4+2 i-2 i-i^{2}=$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$ $=12$
36. $(-2+i)(-2-i)=5$
$=4+2 i-2 i-i^{2}=$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $=12-18 i$
36. $(-2+i)(-2-i)=5$
$=4+2 i-2 i-i^{2}=$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\text { 36. } \begin{aligned}
& (-2+i)(-2-i)=5 \\
= & 4+2 i-2 i-i^{2}=
\end{aligned}
$$

38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
\text { 36. } \begin{aligned}
& (-2+i)(-2-i)=5 \\
= & 4+2 i-2 i-i^{2}=
\end{aligned}
$$

38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $=12-18 i-8 i$
36. $(-2+i)(-2-i)=5$ $=4+2 i-2 i-i^{2}=$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $=12-18 i-8 i+12 i^{2}$
36. $(-2+i)(-2-i)=5$ $=4+2 i-2 i-i^{2}=$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$

$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=$ $\qquad$

$$
=12-18 i-8 i+12 i^{2}=
$$

36. $(-2+i)(-2-i)=5$
$=4+2 i-2 i-i^{2}=$
37. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $=\mathbf{1 2}-\mathbf{1 8 i} \mathbf{i} \mathbf{8 i}+12 \mathbf{i}^{\mathbf{2}}=$
36. $(-2+i)(-2-i)=5$ $=4+2 i-2 i-i^{2}=$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$
$=64-40 i+40 i-25 i^{2}=$
37. $(6-4 i)(2-3 i)=$ $=\mathbf{1 2}-\mathbf{1 8 i} \mathbf{i} \mathbf{8 i}+12 \mathbf{i}^{\mathbf{2}}=$
36. $(-2+i)(-2-i)=5$
$=4+2 i-2 i-i^{2}=$
38. $(1-i)(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$
$=64-40 i+40 i-25 i^{2}=$

$=12-18 i-8 i+12 i^{2}=$
36. $(-2+i)(-2-i)=5$

$$
=4+2 i-2 i-i^{2}=
$$

38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$

$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=0$
$=12-18 i-8 i+12 i^{2}=$
38. $(-2+i)(-2-i)=5$
$=4+2 i-2 i-i^{2}=$
39. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$

$$
\text { 36. }(-2+i)(-2-i)=5
$$

$$
=64-40 i+40 i-25 i^{2}=
$$

$$
=4+2 i-2 i-i^{2}=
$$

37. $(6-4 i)(2-3 i)=0-26 i$ $=12-18 i-8 i+12 i^{2}=$
38. $(1-\mathbf{i})(1+3 i)=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$

$$
\text { 36. }(-2+i)(-2-i)=5
$$

$$
=64-40 i+40 i-25 i^{2}=
$$

$$
=4+2 i-2 i-i^{2}=
$$

37. $(6-4 i)(2-3 i)=-26 i$

$$
=12-18 i-8 i+12 i^{2}=
$$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=-26 i$ $=12-18 i-8 i+12 i^{2}=$

$$
\text { 36. }(-2+i)(-2-i)=5
$$

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=4+2 i-2 i-i^{2}=
$$

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35. $(8+5 i)(8-5 i)=89$

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=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=-26 i$ $=12-18 i-8 i+12 i^{2}=$
38. $(-2+i)(-2-i)=5$

$$
=4+2 i-2 i-i^{2}=
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Perform the indicated operations. Express complex answers in a + bi form.
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=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=-26 i$ $=12-18 i-8 i+12 i^{2}=$

$$
\text { 36. }(-2+i)(-2-i)=5
$$

$$
=4+2 i-2 i-i^{2}=
$$

$$
\text { 38. } \begin{aligned}
& (1-i)(1+3 i)= \\
& =1
\end{aligned}
$$

$$
=
$$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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\text { 36. }(-2+i)(-2-i)=5
$$

$$
=4+2 i-2 i-i^{2}=
$$

$$
\text { 38. } \begin{aligned}
& (1-i)(1+3 i)= \\
& =1
\end{aligned}
$$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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35. $(8+5 i)(8-5 i)=89$

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=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=-26 i$ $=12-18 i-8 i+12 i^{2}=$

$$
\text { 36. }(-2+i)(-2-i)=5
$$

$$
=4+2 i-2 i-i^{2}=
$$

$$
\text { 38. } \begin{aligned}
& (1-i)(1+3 i)= \\
& =1+3 i
\end{aligned}
$$

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=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=-26 i$ $=12-18 i-8 i+12 i^{2}=$

$$
\text { 36. }(-2+i)(-2-i)=5
$$

$$
=4+2 i-2 i-i^{2}=
$$

$$
\text { 38. } \begin{aligned}
& (1-i)(1+3 i)= \\
& =1+3 i
\end{aligned}
$$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=89$

$$
=64-40 i+40 i-25 i^{2}=
$$

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$$
\text { 36. }(-2+i)(-2-i)=5
$$

$$
=4+2 i-2 i-i^{2}=
$$

$$
\text { 38. } \begin{aligned}
& (1-i)(1+3 i)= \\
& =1+3 i-i
\end{aligned}
$$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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35. $(8+5 i)(8-5 i)=89$

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=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=-26 i$ $=12-18 i-8 i+12 i^{2}=$

$$
\text { 36. }(-2+i)(-2-i)=5
$$

$$
=4+2 i-2 i-i^{2}=
$$

$$
\text { 38. } \begin{gathered}
(1-i)(1+\underset{i}{3 i})= \\
=1+3 i-i
\end{gathered}
$$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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35. $(8+5 i)(8-5 i)=89$

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$$

37. $(6-4 i)(2-3 i)=-26 i$ $=12-18 i-8 i+12 i^{2}=$

$$
\text { 36. }(-2+i)(-2-i)=5
$$

$$
=4+2 i-2 i-i^{2}=
$$

$$
\text { 38. } \begin{aligned}
&(1-i) \\
&=(1+3 i) \\
&= 1+3 i-i-3 i^{2}
\end{aligned}
$$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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37. $(6-4 i)(2-3 i)=-26 i$ $=12-18 i-8 i+12 i^{2}=$
38. $(-2+i)(-2-i)=5$

$$
=4+2 i-2 i-i^{2}=
$$

38. $(1-i)(1+3 i)=$

$$
=\mathbf{1}+\mathbf{3 i}-\mathbf{i}-3 \mathbf{i}^{2}=
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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35. $(8+5 i)(8-5 i)=89$

$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=-26 i$
$=12-18 i-8 i+12 i^{2}=$
38. $(-2+i)(-2-i)=5$

$$
=4+2 i-2 i-i^{2}=
$$



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Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$

$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=-26 \mathbf{i}$
$=12-18 i-8 i+12 i^{2}=$

$$
\text { 36. }(-2+i)(-2-i)=5
$$

$$
=4+2 i-2 i-i^{2}=
$$

38. $(1-i)(1+3 i)=$

$$
=\mathbf{1}+\mathbf{3 i}-\mathbf{i}-\mathbf{3 i ^ { 2 }}=
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

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Perform the indicated operations. Express complex answers in a + bi form.
35.


$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=-26 i$ $=12-18 i-8 i+12 i^{2}=$

$$
\text { 36. }(-2+i)(-2-i)=5
$$

$$
=4+2 \mathbf{i}-2 i-i^{2}=
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When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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$$
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37. $(6-4 i)(2-3 i)=-26 i$ $=12-18 i-8 i+12 i^{2}=$

$$
\text { 36. }(-2+i)(-2-i)=5
$$

$$
=4+2 i-2 i-i^{2}=
$$

$$
\begin{aligned}
& \text { 38. }(1-\mathbf{i})(1+3 i)=4 \\
& \downarrow \downarrow \\
& =1+3 i-i-3 i^{2}=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=-26 i$ $=12-18 i-8 i+12 i^{2}=$

$$
\text { 36. }(-2+i)(-2-i)=5
$$

$$
=4+2 \mathbf{i}-2 i-i^{2}=
$$

$$
\text { 38. } \begin{gathered}
(1-i)(1+3 i)=4+2 i \\
\downarrow \downarrow \\
=1+3 i-i-3 i^{2}=
\end{gathered}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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Perform the indicated operations. Express complex answers in a + bi form.
35.


$$
=64-40 i+40 i-25 i^{2}=
$$

37. $(6-4 i)(2-3 i)=-26 i$ $=12-18 i-8 i+12 i^{2}=$
38. $(-2+i)(-2-i)=5$

$$
=4+2 i-2 i-i^{2}=
$$

$$
\text { 38. }(1-i)(1+3 i)=4+2 i
$$

$$
=\mathbf{1}+\mathbf{3 i}-\mathbf{i}-\mathbf{3} \mathbf{i}^{2}=
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
35. $(8+5 i)(8-5 i)=$ $\qquad$ 36. $(-2+i)(-2-i)=5$ $=4+2 i-2 i-i^{2}=$
37. $(6-4 i)(2-3 i)=$ $\qquad$ 38. $(1-i)(1+3 i)=-4+2 i$
$=12-18 i-8 i+12 i^{2}=$ $=\mathbf{1}+\mathbf{3 i}-\mathbf{i}-\mathbf{3 i}^{2}=$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
39. $(2+5 i)^{2}=$ $\qquad$
41. $(-5+i)^{2}=$ $\qquad$
40. $(4-3 i)^{2}=$ $\qquad$
42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
39. $(2+5 i)^{2}=$ $\qquad$
41. $(-5+i)^{2}=$ $\qquad$
40. $(4-3 i)^{2}=$ $\qquad$
42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
39. $(2+5 i)^{2}=$ $\qquad$
$=(2+5 i)(2+5 i)$
40. $(4-3 i)^{2}=$ $\qquad$
42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
&(2+5 i)^{2}= \\
&=(2+5 i)(2+5 i)= \\
&=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$
43. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}= \\
= & (2+5 i)(2+5 i)= \\
= & 4
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$
43. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}= \\
= & (2+5 i)(2+5 i)= \\
= & 4
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$
43. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}= \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$
43. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
39. $(2+5 i)^{2}=$
$=(2+5 i)(2+5 i)=$
$=4+10 \mathrm{i}$
41. $(-5+i)^{2}=$ $\qquad$
40. $(4-3 i)^{2}=$ $\qquad$
42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
39. $(2+5 i)^{2}=$

$$
\begin{aligned}
& =(2+5 i)(2+5 i)= \\
& =4+10 i+10 i
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$
43. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
39. $(2+5 i)^{2}=$ $\qquad$
$=(2+5 i)(2+5 i)=$ $\square$
$=\mathbf{4 + 1 0 i}+10 i$
41. $(-5+i)^{2}=$ $\qquad$
40. $(4-3 i)^{2}=$ $\qquad$
42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
39. $(2+5 i)^{2}=$ $\qquad$
$=(2+5 i)(2+5 i)=$
$=\mathbf{4}+\mathbf{1 0 i}+\mathbf{1 0 i}+\mathbf{2 5} \mathrm{i}^{\mathbf{2}}$
41. $(-5+i)^{2}=$ $\qquad$
40. $(4-3 i)^{2}=$ $\qquad$
42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}= \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$
43. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}= \\
= & (2+5 i)(2+5 i)= \\
& \downarrow \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$
43. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}= \\
= & (2+5 i)(2+5 i)= \\
& \downarrow \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$
43. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

$$
\text { Note: } \text { since } i=\sqrt{-1}, i^{2}=-1
$$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

41. $(-5+i)^{2}=$ $\qquad$
40. $(4-3 i)^{2}=$ $\qquad$
42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
&(2+5 i)^{2}=-21 \\
&=(2+5 i)(2+5 i)= \\
& \downarrow \\
& \downarrow 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$
43. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
\downarrow & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$
43. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$
43. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$
43. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\text { 40. } \begin{aligned}
(4-3 i)^{2}= \\
=(4-3 i)(4-3 i)
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$
42. $(4-3 i)^{2}=$ $\qquad$

$$
=(4-3 i)(4-3 i)=
$$

$$
=
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\begin{aligned}
& \text { 40. }(4-3 i)^{2}= \\
& =(4-3 i)(4-3 i)= \\
& =16
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\text { 40. } \begin{aligned}
& (4-3 i)^{2}= \\
& =(4-3 i)(4-3 i)= \\
& =16
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\text { 40. } \begin{aligned}
&(4-3 i)^{2}= \\
&=(4-3 i)(4-3 i)= \\
&= 16-12 i
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\text { 40. } \begin{aligned}
&(4-3 i)^{2}= \\
&=(4-3 i)(4-3 i)= \\
&= 16-12 i
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\text { 40. } \begin{aligned}
& (4-3 i)^{2}= \\
= & (4-3 i)(4-3 i)= \\
= & 16-12 i-12 i
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\text { 40. } \begin{aligned}
&(4-3 i)^{2}= \\
&=(4-3 i)(4-3 i)= \\
&= 16-12 i-12 i
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\begin{aligned}
\text { 40. } & (4-3 i)^{2}= \\
= & (4-3 i)(4-3 i)= \\
= & 16-12 i-12 i+9 i^{2}
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\begin{aligned}
& \text { 40. }(4-3 i)^{2}= \\
& =(4-3 i)(4-3 i)= \\
& =\left(16-12 i-12 i+9 i^{2}=\right.
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\text { 40. } \begin{aligned}
& (4-3 i)^{2}= \\
= & (4-3 i)(4-3 i)= \\
& \downarrow \\
= & 16-12 i-12 i+9 i^{2}=
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\text { 40. } \begin{aligned}
& (4-3 i)^{2}= \\
= & (4-3 i)(4-3 i)= \\
= & 16-12 i-12 i+9 i^{2}=
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\text { 40. } \begin{aligned}
& (4-3 i)^{2}=\frac{7}{=} \\
= & (4-3 i)(4-3 i)= \\
& \downarrow \\
= & 16-12 i-12 i+9 i^{2}=
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\text { 40. } \begin{aligned}
&(4-3 i)^{2}=\frac{7}{3} \\
&=(4-3 i)(4-3 i)= \\
& \downarrow \\
&= 16-12 i-12 i+9 i^{2}=
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\text { 40. } \begin{aligned}
& (4-3 i)^{2}= \\
= & (4-3 i)(4-3 i)= \\
= & 16-12 i-12 i+9 i^{2}=
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{aligned}
& (2+5 i)^{2}=-21+20 i \\
= & (2+5 i)(2+5 i)= \\
= & 4+10 i+10 i+25 i^{2}=
\end{aligned}
$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\begin{aligned}
\text { 40. } & (4-3 i)^{2}=\frac{7-24 i}{} \\
= & (4-3 i)(4-3 i)= \\
= & 16-12 i-12 i+9 i^{2}=
\end{aligned}
$$

42. $(-3-2 i)^{2}=$ $\qquad$

When multiplying complex numbers, first treat the number $\mathbf{i}$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\text { 39. } \begin{array}{rlr}
(2+5 i)^{2}=-21+20 i & \text { 40. }(4-3 i)^{2}=\underline{7-24 i} \\
=(2+5 i)(2+5 i)= & =(4-3 i)(4-3 i)= \\
= & 4+10 i+10 i+25 i^{2}= & =16-12 i-12 i+9 i^{2}=
\end{array}
$$

41. $(-5+i)^{2}=$ $\qquad$ 42. $(-3-2 i)^{2}=$ $\qquad$

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41. $(-5+i)^{2}=$ $\qquad$

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=(-5+i)(-5+i)
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$$

$$
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$$

41. $(-5+i)^{2}=$ $\qquad$

$$
\begin{aligned}
& =(-5+i)(-5+i)= \\
& =
\end{aligned}
$$

$$
\text { 40. } \begin{aligned}
& (4-3 i)^{2}= \\
= & (4-3 i)(4-3 i)= \\
= & 16-12 i-12 i+9 i^{2}=
\end{aligned}
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& =25 \\
& \text { 42. }(-3-2 i)^{2}=
\end{aligned}
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\text { 41. }(-5+i)^{2}= & \text { 42. }(-3-2 i)^{2}= \\
=(-5+i)(-5+i)= & \\
=25 &
\end{array}
\end{array}
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& =16-12 i-12 i+9 i^{2}= \\
\text { 41. }(-5+i)^{2}= & \text { 42. }(-3-2 i)^{2}= \\
=(-5+i)(-5+i)= \\
= &
\end{array} \\
&=25-5 i
\end{aligned}
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When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 .

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& \text { - } \\
& =25-5 i-5 i \\
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\text { 42. }(-3-2 i)^{2}= \\
=(-3-2 i)(-3-2 i)= \\
=9+6 i
\end{array}
\end{array}
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\text { 39. } \begin{array}{ll}
(2+5 i)^{2}=-21+20 i \\
=(2+5 i)(2+5 i)=
\end{array} & \begin{array}{l}
\text { 40. }(4-3 i)^{2}=\frac{7-24 i}{} \\
=(4-3 i)(4-3 i)= \\
=\left(4+10 i+10 i+25 i^{2}=\right.
\end{array} \\
& =16-12 i-12 i+9 i^{2}= \\
\text { 41. } \begin{array}{l}
(-5+i)^{2}=-24-10 i \\
=(-5+i)(-5+i)=
\end{array} & \begin{aligned}
& \text { 42. }(-3-2 i)^{2}= \\
&=(-3-2 i)(-3-2 i)= \\
&=25-5 i-5 i+i^{2}==9+6 i+6 i+4 i^{2}=
\end{aligned}
\end{array}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 39. }(2+5 i)^{2}=-21+20 i \\
& \text { 40. }(4-3 i)^{2}=7-24 i \\
& =(4-3 i)(4-3 i)= \\
& =16-12 i-12 i+9 i^{2}= \\
& \text { 41. }(-5+i)^{2}=\underline{24-10 i} \\
& =(-5+i)(-5+i)= \\
& =25-5 i-5 i+i^{2}= \\
& \text { 42. }(-3-2 i)^{2}= \\
& \begin{array}{c}
=(-3-2 i)(-3-2 i)= \\
\downarrow \\
=9+6 i+6 i+4 i^{2}=
\end{array}
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 .

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 39. }(2+5 i)^{2}=-21+20 i \\
& \text { 40. }(4-3 i)^{2}=7-24 i \\
& =(4-3 i)(4-3 i)= \\
& =16-12 i-12 i+9 i^{2}= \\
& \text { 41. }(-5+i)^{2}=\underline{24-10 i} \\
& =(-5+i)(-5+i)= \\
& =25-5 i-5 i+i^{2}= \\
& \text { 42. }(-3-2 i)^{2}= \\
& \begin{array}{c}
=(-3-2 i)(-3-2 i)= \\
\downarrow \\
=9+6 i+6 i+4 i^{2}=
\end{array}
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 .

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

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\begin{aligned}
& \text { 39. }(2+5 i)^{2}=-21+20 i \\
& \text { 40. }(4-3 i)^{2}=7-24 i \\
& =(4-3 i)(4-3 i)= \\
& =16-12 i-12 i+9 i^{2}= \\
& \text { 41. }(-5+i)^{2}=\underline{24-10 i} \\
& =(-5+i)(-5+i)= \\
& =25-5 i-5 i+i^{2}= \\
& \text { 42. }(-3-2 i)^{2}=5 \\
& =(-3-2 i)(-3-2 i)= \\
& =9+6 i+6 i+4 i^{2}=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

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\begin{aligned}
& \text { 39. }(2+5 i)^{2}=-21+20 i \\
& \text { 40. }(4-3 i)^{2}=7-24 i \\
& =(4-3 i)(4-3 i)= \\
& =16-12 i-12 i+9 i^{2}= \\
& \text { 41. }(-5+i)^{2}=\underline{24-10 i} \\
& =(-5+i)(-5+i)= \\
& =25-5 i-5 i+i^{2}= \\
& \text { 42. }(-3-2 i)^{2}=5 \\
& =(-3-2 i)(-3-2 i)= \\
& \downarrow \downarrow \\
& =9+6 \mathbf{i}+6 \mathbf{i}+4 \mathbf{i}^{2}=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

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\begin{aligned}
& \text { 39. }(2+5 i)^{2}=-21+20 i \\
& \text { 40. }(4-3 i)^{2}=7-24 i \\
& =(4-3 i)(4-3 i)= \\
& =16-12 i-12 i+9 i^{2}= \\
& \text { 41. }(-5+i)^{2}=\underline{24-10 i} \\
& =(-5+i)(-5+i)= \\
& =25-5 i-5 i+i^{2}= \\
& \text { 42. }(-3-2 i)^{2}=\underline{5+12 i} \\
& =(-3-2 i)(-3-2 i)= \\
& \downarrow \downarrow \\
& =9+6 i+6 i+4 i^{2}=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 39. }(2+5 i)^{2}=-21+20 i \\
& \text { 40. }(4-3 i)^{2}=7-24 i \\
& =(4-3 i)(4-3 i)= \\
& =16-12 i-12 i+9 i^{2}= \\
& \text { 41. }(-5+i)^{2}=\underline{24-10 i} \\
& =(-5+i)(-5+i)= \\
& =25-5 i-5 i+i^{2}= \\
& \text { 42. }(-3-2 i)^{2}=5+12 i \\
& =(-3-2 i)(-3-2 i)= \\
& =9+6 \mathbf{i}+6 i^{2}+i^{2}=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

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\begin{aligned}
& \text { 39. }(2+5 i)^{2}=-21+20 i \\
& \text { 40. }(4-3 i)^{2}=7-24 i \\
& =(4-3 i)(4-3 i)= \\
& =16-12 i-12 i+9 i^{2}= \\
& \text { 41. }(-5+i)^{2}=\underline{24-10 i} \\
& =(-5+i)(-5+i)= \\
& =25-5 i-5 i+i^{2}= \\
& \text { 42. } \begin{aligned}
&(-3-2 i)^{2}= \\
&=(-3-2+12 i)(-3-2 i)= \\
&= 9+6 i+6 i+4 i^{2}=
\end{aligned}
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 .

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
$\qquad$
43. $(2+i)^{3}=$ 44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $\mathrm{i}^{\mathbf{i}}$ as part of your answer, replace it with $\mathbf{- 1}$. Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$ 44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $\mathrm{i}^{2}$ as part of your answer, replace it with -1. Note: since $\mathbf{i}=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$ 44. $(1-2 i)^{3}=$ $\qquad$

## Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$ 44. $(1-2 i)^{3}=$ $\qquad$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$ $=$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$ $=4$
44. $(1-2 i)^{3}=$ $\qquad$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$ $=4$
44. $(1-2 i)^{3}=$ $\qquad$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$=4+2 i$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$

$$
\begin{aligned}
& (2+i)^{2}=(2+i)(2+i)= \\
& =4+2 i+2 i
\end{aligned}
$$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$

$$
\begin{aligned}
& (2+i)^{2}=(2+i)(2+i)= \\
& =4+2 i+2 i+i^{2}
\end{aligned}
$$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i+i^{2}=$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

$$
\text { Note: since } i=\sqrt{-1}, i^{2}=-1 .
$$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

$$
\text { Note: since } i=\sqrt{-1}, i^{2}=-1 .
$$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$

$$
=4+2 i+2 i+i^{2}=3+4 i
$$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i+i^{2}=3+4 i$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i+i^{2}=3+4 i$
$(2+i)^{3}=$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i+i^{2}=3+4 i$
$(2+i)^{3}=(2+i)(3+4 i)$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i+i^{2}=3+4 i$
$(2+i)^{3}=(2+i)(3+4 i)=$

$=$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$

$$
=4+2 i+2 i+i^{2}=3+4 i
$$

$(2+i)^{3}=(2+i)(3+4 i)=$

$=6$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i+i^{2}=3+4 i$
$(2+i)^{3}=(2+i)(3+4 i)=$
$=6$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i+i^{2}=3+4 i$
$(2+i)^{3}=(2+i)(3+4 i)=$
$=6+8 i$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i+i^{2}=3+4 i$
$(2+i)^{3}=(2+i)(3+4 i)=$
$=6+8 i$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i+i^{2}=3+4 i$
$(2+i)^{3}=(2+i)(3+4 i)=$
$=6+8 i+3 i$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$

$$
=4+2 i+2 i+i^{2}=3+4 i
$$

$(2+i)^{3}=(2+i)(3+4 i)=$
$=6+8 i+3 i$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i+i^{2}=3+4 i$
$(2+i)^{3}=(2+i)(3+4 i)=$
$=6+8 i+3 i+4 \mathbf{i}^{\mathbf{2}}$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$

$$
\begin{aligned}
& (2+i)^{2}=(2+i)(2+i)= \\
& =4+2 i+2 i+i^{2}=3+4 i \\
& (2+i)^{3}=(2+i)(3+4 i)= \\
& =6+8 i+3 i+4 i^{2}=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$

$$
=4+2 i+2 i+i^{2}=3+4 i
$$

$$
(2+i)^{3}=(2+i)(3+4 i)=
$$

$$
=6+8 i+3 i+4 i^{2}=
$$

44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=$ $\qquad$
$(2+i)^{2}=(2+i)(2+i)=$

$$
=4+2 i+2 i+i^{2}=3+4 i
$$

$$
(2+i)^{3}=(2+i)(3+4 i)=
$$

$$
=6+8 i+3 i+4 i^{2}=
$$

44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=\underline{2}$
$(2+i)^{2}=(2+i)(2+i)=$

$$
=4+2 i+2 i+i^{2}=3+4 i
$$

$$
(2+i)^{3}=(2+i)(3+4 i)=
$$

$$
=6+8 i+3 i+4 i^{2}=
$$

44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=\underline{2}$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i+i^{2}=3+4 i$
$(2+i)^{3}=(2+i)(3+4 i)=$
$\downarrow \downarrow$
$=6+8 i+3 i+4 i^{2}=$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=\underline{2+11 i}$
$(2+i)^{2}=(2+i)(2+i)=$
$=4+2 i+2 i+i^{2}=3+4 i$
$(2+i)^{3}=(2+i)(3+4 i)=$
$\downarrow \downarrow$
$=6+8 i+3 i+4 i^{2}=$
44. $(1-2 i)^{3}=$ $\qquad$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=\underline{2+11 i}$
44. $(1-2 i)^{3}=$ $\qquad$
$=4+2 \mathbf{i}+2 \mathbf{i}+\mathbf{i}^{2}=3+4 i$
$(2+i)^{3}=(2+i)(3+4 i)=$
$=6+8 i+3 i+4 i^{2}=$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 . Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. } \begin{array}{l}
(2+i)^{3}=\underline{2+11 i} \\
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1. Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. } \begin{array}{l}
(2+i)^{3}=\underline{2+11 i} \\
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

44. $(1-2 i)^{3}=$ $\qquad$

## Square it first !!

When multiplying complex numbers, first treat the number $i$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. }(2+i)^{3}=2+11 i \\
& (2+i)^{2}=(2+i)(2+i)= \\
& =4+2 i+2 i+i^{2}=3+4 i \\
& (2+i)^{3}=(2+i)(3+4 i)= \\
& =6+8 i+3 i+4 i^{2}=
\end{aligned}
$$

44. $(1-2 i)^{3}=$
$(1-2 i)^{2}=$

## Square it first !!

When multiplying complex numbers, first treat the number $i$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. }(2+i)^{3}=2+11 i \\
& (2+i)^{2}=(2+i)(2+i)= \\
& =4+2 i+2 i+i^{2}=3+4 i \\
& (2+i)^{3}=(2+i)(3+4 i)= \\
& =6+8 i+3 i+4 i^{2}=
\end{aligned}
$$

$$
\begin{aligned}
& \text { 44. }(1-2 i)^{3}= \\
& (1-2 i)^{2}=(1-2 i)(1-2 i)
\end{aligned}
$$

## Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. } \begin{array}{l}
(2+i)^{3}=\underline{2+11 i} \\
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$



Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. } \begin{array}{l}
(2+i)^{3}=\underline{2+11 i} \\
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 44. }(1-2 i)^{3}= \\
& (1-2 i)^{2}=(1-2 i)(1-2 i)= \\
& =1
\end{aligned}
$$

## Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. } \begin{array}{l}
(2+i)^{3}=\underline{2+11 i} \\
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 44. }(1-2 i)^{3}= \\
& (1-2 i)^{2}=(1-2 i)(1-2 i)= \\
& =1
\end{aligned}
$$

## Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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Perform the indicated operations. Express complex answers in a + bi form.

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\begin{aligned}
& \text { 43. } \begin{array}{l}
(2+i)^{3}=\underline{2+11 i} \\
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

44. $(1-2 i)^{3}=$

$=1-2 \mathbf{i}$

## Square it first !!

When multiplying complex numbers, first treat the number $i$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

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Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. }(2+i)^{3}=2+11 i \\
& (2+i)^{2}=(2+i)(2+i)= \\
& =4+2 i+2 i+i^{2}=3+4 i \\
& (2+i)^{3}=(2+i)(3+4 i)= \\
& =6+8 i+3 i+4 i^{2}=
\end{aligned}
$$

$$
\begin{aligned}
& \text { 44. }(1-2 i)^{3}= \\
& (1-2 i)^{2}=(1-2 i)(1-2 i)= \\
& =1-2 i
\end{aligned}
$$

## Square it first !!

When multiplying complex numbers, first treat the number $i$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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Perform the indicated operations. Express complex answers in a + bi form.

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\begin{aligned}
& \text { 43. }(2+i)^{3}=\underline{2+11 i} \\
& \begin{array}{l}
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 44. }(1-2 i)^{3}= \\
& (1-2 i)^{2}=(1-2 i)(1-2 i)= \\
& =1-2 i-2 i
\end{aligned}
$$

Square it first !!

When multiplying complex numbers, first treat the number $i$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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Perform the indicated operations. Express complex answers in a + bi form.

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=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 44. }(1-2 i)^{3}= \\
& (1-2 i)^{2}=(1-2 i)(1-2 i)= \\
& =1-2 i-2 i
\end{aligned}
$$

Square it first !!

When multiplying complex numbers, first treat the number $i$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

$$
\text { 44. }(1-2 i)^{3}=
$$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. }(2+i)^{3}=\underline{2+11 i} \\
& \begin{array}{l}
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 44. }(1-2 i)^{3}= \\
& (1-2 i)^{2}=(1-2 i)(1-2 i)= \\
& =1-2 i-2 i+4 i^{2}=
\end{aligned}
$$

Square it first !!

When multiplying complex numbers, first treat the number $i$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. }(2+i)^{3}=\underline{2+11 i} \\
& \begin{array}{l}
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 44. }(1-2 i)^{3}= \\
& \begin{array}{l}
(1-2 i)^{2}=(1-2 i)(1-2 i)= \\
\downarrow \\
=1-2 i-2 i+4 i^{2}=
\end{array}
\end{aligned}
$$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. }(2+i)^{3}=\underline{2+11 i} \\
& \begin{array}{l}
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 44. }(1-2 i)^{3}= \\
& \begin{array}{l}
(1-2 i)^{2}=(1-2 i)(1-2 i)= \\
\downarrow \\
= \\
1-2 i-2 i+4 i^{2}=
\end{array}
\end{aligned}
$$

Square it first !!

When multiplying complex numbers, first treat the number $i$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

$$
\text { Note: since } i=\sqrt{-1}, i^{2}=-1 .
$$

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. }(2+i)^{3}=\underline{2+11 i} \\
& \begin{array}{l}
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 44. }(1-2 i)^{3}= \\
& \begin{array}{l}
(1-2 i)^{2}=(1-2 i)(1-2 i)= \\
\downarrow \\
= \\
1
\end{array}-2 i-2 i+4 i^{2}=-3
\end{aligned}
$$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=-1$.

## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. }(2+i)^{3}=\underline{2+11 i} \\
& \begin{array}{l}
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 44. }(1-2 i)^{3}= \\
& \begin{array}{c}
(1-2 i)^{2}=(1-2 i)(1-2 i)= \\
\downarrow \\
=1-2 i-2 i+4 i^{2}=-3
\end{array}
\end{aligned}
$$

Square it first !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. }(2+i)^{3}=\underline{2+11 i} \\
& \begin{array}{l}
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

44. $(1-2 i)^{3}=$

$$
\begin{gathered}
(1-2 i)^{2}=(1-2 i)(1-2 i)= \\
\downarrow \\
=1-2 i-2 i+4 i^{2}=-3-4 i
\end{gathered}
$$

## Square it first !!

When multiplying complex numbers, first treat the number $i$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

Note: since $i=\sqrt{-1}, i^{2}=\mathbf{- 1}$.

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Perform the indicated operations. Express complex answers in a + bi form.

$$
\begin{aligned}
& \text { 43. }(2+i)^{3}=\underline{2+11 i} \\
& \begin{array}{l}
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
(2+i)^{3}=(2+i)(3+4 i)= \\
=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 44. }(1-2 i)^{3}= \\
& (1-2 i)^{2}=(1-2 i)(1-2 i)= \\
& =1-2 i-2 i+4 i^{2}=-3-4 i
\end{aligned}
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Square it first !!

When multiplying complex numbers, first treat the number $i$ like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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$$
\begin{aligned}
& \text { 43. }(2+i)^{3}=\underline{2+11 i} \\
& \begin{array}{l}
(2+i)^{2}=(2+i)(2+i)= \\
=4+2 i+2 i+i^{2}=3+4 i \\
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=6+8 i+3 i+4 i^{2}=
\end{array}
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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\begin{aligned}
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& (2+i)^{2}=(2+i)(2+i)= \\
& =4+2 i+2 i+i^{2}=3+4 i \\
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\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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\begin{aligned}
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& (2+i)^{2}=(2+i)(2+i)= \\
& =4+2 i+2 i+i^{2}=3+4 i \\
& (2+i)^{3}=(2+i)(3+4 i)= \\
& =6+8 i+3 i+4 i^{2}=
\end{aligned}
$$

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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& (2+i)^{3}=(2+i)(3+4 i)= \\
& =6+8 i+3 i+4 i^{2}=
\end{aligned}
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When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1.

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& (2+i)^{3}=(2+i)(3+4 i)= \\
& =6+8 i+3 i+4 i^{2}=
\end{aligned}
$$

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& (2+i)^{3}=(2+i)(3+4 i)= \\
& =6+8 i+3 i+4 i^{2}=
\end{aligned}
$$

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\end{aligned}
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## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.

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\begin{aligned}
& \text { 43. }(2+i)^{3}=2+11 i \\
& (2+i)^{2}=(2+i)(2+i)= \\
& =4+2 i+2 i+i^{2}=3+4 i \\
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## Algebra II Class Worksheet \#4 Unit 5

Perform the indicated operations. Express complex answers in a + bi form.
43. $(2+i)^{3}=\underline{2+11 i}$ 44. $(1-2 i)^{3}=-11+2 i$
$(2+i)^{2}=(2+i)(2+i)=$

$$
(1-2 i)^{2}=(1-2 i)(1-2 i)=
$$

$$
=4+2 i+2 i+i^{2}=3+4 i
$$

$$
=1-2 i-2 i+4 i^{2}=-3-4 i
$$

$$
(9+i)^{3}=(9+i)(2+4 i)=
$$

$$
(1-9 i)^{3}=(1-9 i)(-2-4 i)=
$$

## Good luck on your homework !!

When multiplying complex numbers, first treat the number i like a variable. Second, remember that $i$ is not a variable. If you get $i^{2}$ as part of your answer, replace it with -1 .

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