# Algebra II <br> Lesson \#1 Unit 6 Class Worksheet \#1 <br> For Worksheet \#1 

Solving Second Degree Equations

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Step 1: Write the equation in standard form, $\underline{A^{2}}{ }^{2}+\underline{B} x+\underline{C}=0$, where $\underline{A}, \underline{B}$, and $\underline{C}$ represent numbers.

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Step 2: Factor the expression $\underline{\mathbf{A}} \mathbf{x}^{2}+\underline{\mathbf{B}} \mathbf{x}+\underline{\mathbf{C}}$.

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Step 3: Apply the zero property of multiplication. If $\mathrm{PQ}=0$ then $\mathrm{P}=0$ or Q = 0 .

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Class worksheets \#1 and \#2 review solving second degree equations using the factoring method.

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Class worksheets \#1 and \#2 review solving second degree equations using the factoring method.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.

1. $\mathbf{x}(\mathbf{x}+7)=$ $\qquad$
2. $5 x(x+6)=$ $\qquad$
3. $3 x(4 x+1)=$ $\qquad$
4. $-6 x(x+3)=$ $\qquad$
5. $\mathbf{x}(\mathrm{x}-1)=$ $\qquad$
6. $2 x(x-3)=$ $\qquad$
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Consider the problem : Multiply 2•3.

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Consider the problem : Multiply $2 \cdot 3$. Of course, the answer is 6 .

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Consider the problem : Multiply $2 \cdot 3$. Of course, the answer is 6 . Now consider the problem : Factor 6.

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Factoring can be thought of as 'undoing multiplication'.

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Consider the problem : Multiply $2 \cdot 3$. Of course, the answer is 6 .
Now consider the problem : Factor 6. This time the answer is $2 \cdot 3$.
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Consider the problem: Factor 91.

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Consider the problem : Multiply $2 \cdot 3$. Of course, the answer is 6 .
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Consider the problem: Factor 91. The answer is $7 \cdot 13$.

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Consider the problem : Multiply $2 \cdot 3$. Of course, the answer is $\mathbf{6}$.
Now consider the problem : Factor 6. This time the answer is $2 \cdot 3$.
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Consider the problem: Factor 91. The answer is $7 \cdot 13$.
This factoring problem is 'more difficult' because you may not be as familiar with multiples of 13.

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In algebra, each factoring pattern depends on a related multiplication pattern.

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In each case, you are asked to multiply a monomial times a binomial.

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The Distributive Law for Multiplication over Addition:

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The Distributive Law for Multiplication over Addition:

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\mathbf{A}(\mathbf{B}+\mathbf{C})=\mathbf{A B}+\mathbf{A C}
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The Distributive Law for Multiplication over Addition:

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\mathbf{A}(\mathbf{B}+\mathbf{C})=\mathbf{A B}+\mathbf{A C}
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The Distributive Law for Multiplication over Subtraction:

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The Distributive Law for Multiplication over Addition:

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\mathbf{A}(\mathbf{B}+\mathbf{C})=\mathbf{A B}+\mathbf{A C}
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The Distributive Law for Multiplication over Subtraction:

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\mathbf{A}(\mathbf{B}-\mathbf{C})=\mathbf{A B}-\mathbf{A C}
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## Algebra II Class Worksheet \#1 Unit 6

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## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.

1. $\mathbf{x}(x+7)=\quad x^{2}+7 x$
2. $5 x(x+6)=5 x^{2}+30 x$
3. $3 x(4 x+1)=12 x^{2}+3 x$
4. $-6 x(x+3)=-6 x^{2}-18 x$
5. $4 x(5 x-6)=20 x^{2}-24 x$
6. $\mathbf{x}(\mathbf{x}-1)=$
7. $2 x(x-3)=\quad 2 x^{2}-6 x$
8. $-3 x(2 x-5)=-6 x^{2}-$

In each case, you are asked to multiply a monomial times a binomial. These problems each involve one of the distributive laws stated below.

The Distributive Law for Multiplication over Addition:

$$
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The distributive laws can be re-written as factoring properties.

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Notice that $\mathbf{A}$ is the greatest common factor of the terms of the binomial.

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Step 1: Find the greatest common factor.

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Step 1: Find the greatest common factor. 'Factor out' this expression.

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## Step 2: Divide each term of the binomial by this expression.

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Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$ 18. $(x-4)(x+4)=$ $\qquad$
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19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.


## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.


## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$ 18. $(x-4)(x+4)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.


## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$ 18. $(x-4)(x+4)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(A+B)(A-B)=A^{2}-A B
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.


## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{A B}+\mathbf{A B}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{A B}+\mathbf{A B}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{A B}+\mathbf{A B}-\mathbf{B}^{2}=
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{A B}+\mathbf{A B}-\mathbf{B}^{2}=
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$
18. $(x-4)(x+4)=$ $\qquad$
20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{A B}+\mathbf{A B}-\mathbf{B}^{2}=\mathbf{A}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$
18. $(x-4)(x+4)=$ $\qquad$
20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{A B}+\mathbf{A B}-\mathbf{B}^{2}=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{A B}+\mathbf{A B}-\mathbf{B}^{2}=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$
18. $(x-4)(x+4)=$ $\qquad$
20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
\begin{gathered}
(A+B)(A-B)=A^{2}-A B+A B-B^{2}=A^{2}-B^{2} \\
(A+B)(A-B)=A^{2}-B^{2}
\end{gathered}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$ 18. $(x-4)(x+4)=$ $\qquad$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$ $\qquad$

$$
=
$$

19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$
$=\mathrm{X}^{2}$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$
$=\mathrm{x}^{2}-$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$
$=x^{2}-6^{2}$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$
$=\mathrm{x}^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}$
$=x^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=$
$=x^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$
$=x^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=$ $\qquad$ 20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$

$$
=x^{2}-6^{2}=
$$

19. $(3 x+5)(3 x-5)=$ $\qquad$
20. $(x-4)(x+4)=$

21. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$
$=\mathrm{x}^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=$ $\qquad$

$$
\begin{aligned}
& \text { 18. }(x-4)(x+4)= \\
& =x^{2} \\
& \text { 20. }(4 x-3)(4 x+3)=
\end{aligned}
$$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$
$=\mathrm{x}^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=$ $\qquad$

$$
\begin{aligned}
& \text { 18. }(x-4)(x+4)= \\
& =x^{2}- \\
& \text { 20. }(4 x-3)(4 x+3)=
\end{aligned}
$$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$
$=\mathrm{x}^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=$ $\qquad$

$$
\begin{aligned}
& \text { 18. }(x-4)(x+4)= \\
& =x^{2}-4^{2} \\
& \text { 20. }(4 x-3)(4 x+3)=
\end{aligned}
$$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$

$$
=x^{2}-6^{2}=
$$

19. $(3 x+5)(3 x-5)=$ $\qquad$
20. $(x-4)(x+4)=$

$$
=x^{2}-4^{2}=
$$

20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$
$=\mathrm{x}^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=$ $\qquad$

$$
\begin{aligned}
& \text { 18. }(x-4)(x+4)=-\quad x^{2} \\
& =x^{2}-4^{2}= \\
& \text { 20. }(4 x-3)(4 x+3)=
\end{aligned}
$$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$
$=\mathrm{x}^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=$ $\qquad$

$$
\begin{aligned}
& \text { 18. }(x-4)(x+4)=\frac{x^{2}-}{} \begin{array}{l}
=x^{2}-4^{2}= \\
\text { 20. }(4 x-3)(4 x+3)=
\end{array}
\end{aligned}
$$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$
$=\mathrm{x}^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=$ $\qquad$

$$
\begin{aligned}
& \text { 18. }(x-4)(x+4)=\quad x^{2}-16 \\
& =x^{2}-4^{2}=
\end{aligned}
$$

20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$
$=\mathrm{x}^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=$ $\qquad$
18. $(x-4)(x+4)=\quad x^{2}-16$

$$
=x^{2}-4^{2}=
$$

20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.

$$
\begin{array}{lc}
\text { 17. } \begin{array}{l}
(x+6)(x-6)= \\
=x^{2}-6^{2}=
\end{array} & \begin{array}{c}
\text { 18. }(x-4)(x+4)= \\
\\
=x^{2}-36 \\
x^{2}=
\end{array} \\
\text { 19. }(3 x+5)(3 x-5)=\square & \text { 20. }(4 x-3)(4 x+3)= \\
=(3 x)^{2}
\end{array}
$$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.

$$
\begin{aligned}
& \text { 17. } \begin{array}{l}
(x+6)(x-6)=-x^{2}-36 \\
=x^{2}-6^{2}= \\
\text { 19. }(3 x+5)(3 x-5)= \\
=(3 x)^{2}-
\end{array} .
\end{aligned}
$$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.

$$
\begin{aligned}
& \text { 17. }(x+6)(x-6)=\underline{x^{2}-36} \\
& =x^{2}-6^{2}= \\
& \text { 19. }(3 x+5)(3 x-5)= \\
& =(3 x)^{2}-5^{2} \\
& \text { 18. }(x-4)(x+4)=\quad x^{2}-16 \\
& =x^{2}-4^{2}= \\
& \text { 20. }(4 x-3)(4 x+3)=
\end{aligned}
$$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.

$$
\begin{array}{ll}
\text { 17. } \begin{array}{l}
(x+6)(x-6)= \\
=x^{2}-6^{2}=
\end{array} & \begin{array}{c}
\text { 18. }(x-4)(x+4)= \\
=x^{2}-4^{2}=
\end{array} \\
\text { 19. }(3 x+5)(3 x-5)=\longrightarrow \\
(3 x)^{2}-5^{2}=
\end{array} \quad \begin{aligned}
& x^{2}-16 \\
& =(4 x-3)(4 x+3)=
\end{aligned}
$$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.

$$
\begin{aligned}
& \text { 17. }(x+6)(x-6)=\quad x^{2}-36 \\
& =x^{2}-6^{2}= \\
& \text { 19. }(3 x+5)(3 x-5)=\underline{9 x^{2}} \\
& =(3 x)^{2}-5^{2}= \\
& \text { 18. }(x-4)(x+4)=\quad x^{2}-16 \\
& =\mathrm{x}^{2}-4^{2}= \\
& \text { 20. }(4 x-3)(4 x+3)=
\end{aligned}
$$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.

$$
\begin{aligned}
& \text { 17. } \begin{array}{l}
(x+6)(x-6)=\begin{array}{l}
x^{2}-36 \\
=x^{2}-6^{2}=
\end{array} \\
\begin{array}{c}
\text { 18. }(x-4)(x+4)= \\
=x^{2}-4^{2}=
\end{array} \\
\text { 19. }(3 x+5)(3 x-5)=\frac{x^{2}-16}{} \begin{array}{l}
9 x^{2}- \\
(3 x)^{2}-5^{2}=
\end{array} \\
\text { 20. }(4 x-3)(4 x+3)=
\end{array}
\end{aligned}
$$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$
$=\mathrm{x}^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=9 x^{2}-25$

$$
=(3 x)^{2}-5^{2}=
$$

18. $(x-4)(x+4)=\quad x^{2}-16$

$$
=x^{2}-4^{2}=
$$

20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$
$=\mathrm{x}^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=9 x^{2}-25$ $=(3 x)^{2}-5^{2}=$
18. $(x-4)(x+4)=\quad x^{2}-16$
$=\mathrm{x}^{2}-4^{2}=$
20. $(4 x-3)(4 x+3)=$ $\qquad$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$
$=\mathrm{x}^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=9 x^{2}-25$ $=(3 x)^{2}-5^{2}=$
18. $(x-4)(x+4)=\quad x^{2}-16$
$=x^{2}-4^{2}=$
20. $(4 x-3)(4 x+3)=$ $=(4 x)^{2}$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$
$=\mathrm{x}^{2}-6^{2}=$
19. $(3 x+5)(3 x-5)=9 x^{2}-25$ $=(3 x)^{2}-5^{2}=$
18. $(x-4)(x+4)=\quad x^{2}-16$

$$
=x^{2}-4^{2}=
$$

20. $(4 x-3)(4 x+3)=$ $=(4 x)^{2}-$

These problems involve a special multiplication pattern. Notice that in each problem we are multiplying two binomials. Also notice that one of the binomials is in the form $A+B$ and the other binomial is in the form $A-B$.

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(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
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## Algebra II Class Worksheet \#1 Unit 6

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18. $(x-4)(x+4)=\quad x^{2}-16$

$$
=x^{2}-4^{2}=
$$

$$
\text { 20. } \begin{aligned}
&(4 x-3)(4 x+3)=16 x^{2} \\
&=(4 x)^{2}-3^{2}=
\end{aligned}
$$

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18. $(x-4)(x+4)=\quad x^{2}-16$

$$
=x^{2}-4^{2}=
$$

$$
\begin{aligned}
& \text { 20. }(4 x-3)(4 x+3)=16 x^{2}- \\
& =(4 x)^{2}-3^{2}=
\end{aligned}
$$

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18. $(x-4)(x+4)=\quad x^{2}-16$

$$
=x^{2}-4^{2}=
$$

$$
\text { 20. }(4 x-3)(4 x+3)=16 x^{2}-9
$$

$$
=(4 x)^{2}-3^{2}=
$$

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18. $(x-4)(x+4)=\quad x^{2}-16$

$$
=x^{2}-4^{2}=
$$

20. $(4 x-3)(4 x+3)=16 x^{2}-9$ $=(4 x)^{2}-3^{2}=$

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## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
17. $(x+6)(x-6)=\quad x^{2}-36$

> 18. $(x-4)(x+4)=-\quad x^{2}-16$
> $=x^{2}-4^{2}=$
19. $(3 x+5)(3 x-5)=9 x^{2}-25$ $=(3 x)^{2}-5^{2}=$

$$
\text { 20. } \begin{aligned}
(4 x-3)(4 x+3)= \\
=(4 x)^{2}-3^{2}=
\end{aligned}
$$

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$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $\mathrm{x}^{2}-49=$ $\qquad$
23. $36 x^{2}-25=$ $\qquad$
26. $x^{2}-4=$ $\qquad$ 24. $4 x^{2}-81=$ $\qquad$

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $\mathrm{x}^{2}-49=$ $\qquad$ 26. $x^{2}-4=$ $\qquad$
23. $36 x^{2}-25=$ $\qquad$ 24. $4 x^{2}-81=$

The multiplication pattern below can be used to factor.

$$
(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})=\mathbf{A}^{2}-\mathbf{B}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $\mathrm{x}^{2}-49=$ $\qquad$
23. $36 x^{2}-25=$ $\qquad$
26. $x^{2}-4=$ $\qquad$ 24. $4 x^{2}-81=$ $\qquad$

The multiplication pattern below can be used to factor.

$$
\begin{aligned}
& (A+B)(A-B)=A^{2}-B^{2} \\
& A^{2}-B^{2}=(A+B)(A-B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $\mathrm{x}^{2}-49=$ $\qquad$
23. $36 x^{2}-25=$ $\qquad$
26. $x^{2}-4=$ $\qquad$ 24. $4 x^{2}-81=$ $\qquad$

The multiplication pattern below can be used to factor. This factoring pattern is called 'the difference of two squares'.

$$
\begin{aligned}
& (A+B)(A-B)=A^{2}-B^{2} \\
& A^{2}-B^{2}=(A+B)(A-B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $\mathrm{x}^{2}-49=$ $\qquad$
23. $36 x^{2}-25=$ —
26. $x^{2}-4=$ $\qquad$ 24. $4 x^{2}-81=$ $\qquad$

The Difference of Two Squares Factoring Pattern

$$
\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $\mathrm{x}^{2}-49=$ $\qquad$ 26. $x^{2}-4=$ $\qquad$
23. $36 x^{2}-25=$ $\longrightarrow$
24. $4 x^{2}-81=$ $\qquad$

## The Difference of Two Squares Factoring Pattern

$$
\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $\mathrm{x}^{2}-49=$ $=$
23. $\mathbf{3 6} \mathrm{x}^{2}-\mathbf{2 5}=$ $\qquad$
26. $x^{2}-4=$ $\qquad$
24. $4 x^{2}-81=$ $\qquad$

## The Difference of Two Squares Factoring Pattern

$$
\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $\mathrm{x}^{2}-49=$

$$
=\mathbf{x}^{2}
$$

23. $\mathbf{3 6} \mathrm{x}^{2}-\mathbf{2 5}=$ $\qquad$
24. $x^{2}-4=$ $\qquad$
25. $4 x^{2}-81=$ $\qquad$

The Difference of Two Squares Factoring Pattern

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\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $\mathrm{x}^{2}-49=$

$$
=\mathbf{x}^{2}-
$$

23. $\mathbf{3 6} \mathrm{x}^{2}-\mathbf{2 5}=$ $\qquad$
24. $x^{2}-4=$ $\qquad$
25. $4 x^{2}-81=$ $\qquad$

## The Difference of Two Squares Factoring Pattern

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\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $\mathrm{x}^{2}-49=$ $=x^{2}-7^{2}$
23. $36 x^{2}-25=$ $\qquad$
26. $x^{2}-4=$ $\qquad$
24. $4 x^{2}-81=$ $\qquad$

The Difference of Two Squares Factoring Pattern

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\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $\mathrm{x}^{2}-49=$
$=\mathrm{x}^{2}-7^{2}=$
23. $\mathbf{3 6} \mathrm{x}^{2}-\mathbf{2 5}=$ $\qquad$ 24. $4 x^{2}-81=$

The Difference of Two Squares Factoring Pattern

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\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $x^{2}-49=(x+7)($
$=\mathrm{x}^{2}-7^{2}=$
23. $\mathbf{3 6} \mathrm{x}^{2}-\mathbf{2 5}=$ $\qquad$
26. $x^{2}-4=$ $\qquad$
24. $4 x^{2}-81=$ $\qquad$

The Difference of Two Squares Factoring Pattern

$$
\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

$$
\begin{aligned}
& \text { 21. } x^{2}-49=(x+7)(x-7) \\
& =x^{2}-7^{2}=
\end{aligned}
$$

23. $\mathbf{3 6} \mathrm{x}^{2}-\mathbf{2 5}=$ $\qquad$ 24. $4 x^{2}-81=$

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21. $x^{2}-49=(x+7)(x-7)$
$=\mathrm{x}^{2}-7^{2}=$
23. $\mathbf{3 6} \mathrm{x}^{2}-\mathbf{2 5}=$ $\qquad$

$$
\text { 26. } x^{2}-4=
$$

$$
=
$$

24. $4 x^{2}-81=$ $\qquad$

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The Difference of Two Squares Factoring Pattern

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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $\begin{aligned} & x^{2}-49=(x+7)(x-7) \\ = & x^{2}-7^{2}=\end{aligned}$
23. $\mathbf{3 6} \mathrm{x}^{2}-\mathbf{2 5}=$ $\qquad$

$$
\text { 26. } \quad x^{2}-4=
$$

24. $4 x^{2}-81=$ $\qquad$

## The Difference of Two Squares Factoring Pattern

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$=\mathrm{x}^{2}-7^{2}=$
23. $\mathbf{3 6} \mathrm{x}^{2}-\mathbf{2 5}=$ $\qquad$

$$
\text { 26. } \begin{aligned}
x^{2}-4 & = \\
= & x^{2}-2^{2}
\end{aligned}
$$

24. $4 x^{2}-81=$ $\qquad$

The Difference of Two Squares Factoring Pattern

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\begin{aligned}
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& =x^{2}-7^{2}=
\end{aligned}
$$

23. $\mathbf{3 6} \mathrm{x}^{2}-\mathbf{2 5}=$ $\qquad$

$$
\text { 26. } \begin{aligned}
& x^{2}-4= \\
&= x^{2}-2^{2}=
\end{aligned}
$$

24. $4 x^{2}-81=$ $\qquad$

The Difference of Two Squares Factoring Pattern

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\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
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Factor each of the following.
21. $x^{2}-49=(x+7)(x-7)$
$=x^{2}-7^{2}=$
23. $\mathbf{3 6} \mathrm{x}^{2}-\mathbf{2 5}=$ $\qquad$

$$
\begin{aligned}
& \text { 26. } x^{2}-4=\frac{(x+2)( }{} \\
& =x^{2}-2^{2}=
\end{aligned}
$$

24. $4 x^{2}-81=$ $\qquad$

The Difference of Two Squares Factoring Pattern

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\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
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$=x^{2}-7^{2}=$
23. $\mathbf{3 6} \mathrm{x}^{2}-\mathbf{2 5}=$ $\qquad$

$$
\text { 26. } \begin{aligned}
& x^{2}-4=\frac{(x+2)(x-2)}{}=x^{2}-2^{2}=
\end{aligned}
$$

24. $4 x^{2}-81=$ $\qquad$

The Difference of Two Squares Factoring Pattern

$$
\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

$$
\text { 21. } \left.x^{2}-49=(x+7)(x-7)\right)=\left(x^{2}-7^{2}=\right.
$$

23. $36 x^{2}-25=$ $\qquad$

$$
\text { 26. } \begin{aligned}
& x^{2}-4=\frac{(x+2)(x-2)}{} \\
& =x^{2}-2^{2}=
\end{aligned}
$$

$$
\text { 24. } 4 x^{2}-81=
$$

$\qquad$

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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

$$
\begin{aligned}
& \text { 21. } x^{2}-49=(x+7)(x-7) \\
& =\mathrm{x}^{2}-7^{2}= \\
& \text { 26. } \begin{aligned}
& x^{2}-4=(x+2)(x-2) \\
= & x^{2}-2^{2}=
\end{aligned} \\
& \text { 24. } 4 x^{2}-81= \\
& \text { 23. } 36 x^{2}-25= \\
& \text { 24. } 4 x^{2}-81= \\
& =(6 \mathrm{x})^{2}
\end{aligned}
$$

The Difference of Two Squares Factoring Pattern

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\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
$$

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\begin{aligned}
& \text { 21. } x^{2}-49=(x+7)(x-7) \\
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& \text { 26. } \begin{aligned}
& x^{2}-4=(x+2)(x-2) \\
= & x^{2}-2^{2}=
\end{aligned} \\
& \text { 24. } 4 x^{2}-81= \\
& \text { 23. } 36 x^{2}-25= \\
& \text { 24. } 4 x^{2}-81= \\
& =(6 x)^{2}-
\end{aligned}
$$

The Difference of Two Squares Factoring Pattern

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\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
$$

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Factor each of the following.

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\begin{aligned}
& \text { 21. } x^{2}-49=(x+7)(x-7) \\
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& \text { 26. } \begin{aligned}
& x^{2}-4 \\
= & x^{2}-2^{2}=
\end{aligned} \\
& \text { 24. } 4 x^{2}-81= \\
& \text { 23. } 36 x^{2}-25= \\
& \text { 24. } 4 x^{2}-81= \\
& =(6 x)^{2}-5^{2}
\end{aligned}
$$

## The Difference of Two Squares Factoring Pattern

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\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $x^{2}-49=\quad(x+7)(x-7)$

$$
=x^{2}-7^{2}=
$$

$$
\begin{aligned}
& \text { 26. } x^{2}-4=\frac{(x+2)(x-2)}{} \\
& =x^{2}-2^{2}=
\end{aligned}
$$

23. $36 x^{2}-25=$
24. $4 x^{2}-81=$

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=(6 x)^{2}-5^{2}=
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The Difference of Two Squares Factoring Pattern

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\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

$$
\begin{array}{ll}
\text { 21. } \begin{array}{ll}
x^{2}-49=\quad(x+7)(x-7) \\
= & x^{2}-7^{2}=
\end{array} & \begin{array}{l}
\text { 26. } \\
x^{2}-4= \\
=x^{2}-2^{2}=
\end{array} \\
\text { 23. } \begin{array}{ll}
36 x^{2}-25=(6 x+5)(x-2) \\
=(6 x)^{2}-5^{2}= & \text { 24. } 4 x^{2}-81=
\end{array}
\end{array}
$$

## The Difference of Two Squares Factoring Pattern

$$
\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

$$
\begin{array}{lll}
\text { 21. } \begin{array}{l}
x^{2}-49=\frac{(x+7)(x-7)}{} \\
=x^{2}-7^{2}=
\end{array} & \begin{array}{l}
\text { 26. } x^{2}-4=\frac{(x+2)(x-2)}{} \\
=x^{2}-2^{2}= \\
\text { 23. } 36 x^{2}-25=(6 x+5)(6 x-5) \\
=(6 x)^{2}-5^{2}= \\
\end{array} & \text { 24. } 4 x^{2}-81=
\end{array}
$$

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& =x^{2}-2^{2}=
\end{aligned}
$$

$$
\begin{aligned}
& \text { 24. } 4 x^{2}-81= \\
& =
\end{aligned}
$$

The Difference of Two Squares Factoring Pattern

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=(6 x)^{2}-5^{2}=
$$

$$
\text { 26. } \begin{aligned}
& x^{2}-4=\frac{(x+2)(x-2)}{} \\
&=x^{2}-2^{2}=
\end{aligned}
$$

$$
\text { 24. } \begin{aligned}
& 4 x^{2}-81= \\
= & (2 x)^{2}
\end{aligned}
$$

The Difference of Two Squares Factoring Pattern

$$
\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
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## Algebra II Class Worksheet \#1 Unit 6

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& \text { 21. } x^{2}-49=(x+7)(x-7) \\
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$$

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\begin{aligned}
& \text { 26. } x^{2}-4=\frac{(x+2)(x-2)}{} \\
& =x^{2}-2^{2}=
\end{aligned}
$$

$$
\text { 24. } \begin{aligned}
& 4 x^{2}-81= \\
= & (2 x)^{2}-
\end{aligned}
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The Difference of Two Squares Factoring Pattern

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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

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23. $36 x^{2}-25=(6 x+5)(6 x-5)$

$$
=(6 x)^{2}-5^{2}=
$$

$$
\text { 26. } \begin{aligned}
& x^{2}-4=\frac{(x+2)(x-2)}{} \\
&=x^{2}-2^{2}=
\end{aligned}
$$

$$
\text { 24. } \begin{aligned}
& 4 x^{2}-81= \\
= & (2 x)^{2}-9^{2}
\end{aligned}
$$

The Difference of Two Squares Factoring Pattern

$$
\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

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& \text { 21. } x^{2}-49=(x+7)(x-7) \\
& =x^{2}-7^{2}=
\end{aligned}
$$

23. $36 x^{2}-25=(6 x+5)(6 x-5)$

$$
=(6 x)^{2}-5^{2}=
$$

$$
\begin{aligned}
& \text { 26. } x^{2}-4=\frac{(x+2)(x-2)}{} \\
& =x^{2}-2^{2}=
\end{aligned}
$$

$$
\text { 24. } \begin{aligned}
4 x^{2}-81= \\
=(2 x)^{2}-9^{2}=
\end{aligned}
$$

The Difference of Two Squares Factoring Pattern

$$
\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

$$
\begin{aligned}
& \text { 21. } x^{2}-49=(x+7)(x-7) \\
& =x^{2}-7^{2}=
\end{aligned}
$$

23. $36 x^{2}-25=(6 x+5)(6 x-5)$

$$
\text { 24. } \begin{aligned}
& 4 x^{2}-81=(2 x+9)( \\
& =(2 x)^{2}-9^{2}=
\end{aligned}
$$

The Difference of Two Squares Factoring Pattern

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\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

$$
\begin{aligned}
& \text { 21. } x^{2}-49=(x+7)(x-7) \\
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\end{aligned}
$$

$$
\text { 26. } \begin{aligned}
& x^{2}-4=\frac{(x+2)(x-2)}{} \\
& =x^{2}-2^{2}=
\end{aligned}
$$

23. $36 x^{2}-25=(6 x+5)(6 x-5)$

$$
\begin{aligned}
& \text { 24. } 4 x^{2}-81=(2 x+9)(2 x-9) \\
& =(2 x)^{2}-9^{2}=
\end{aligned}
$$

The Difference of Two Squares Factoring Pattern

$$
\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

$$
\begin{array}{ll}
\text { 21. } \begin{aligned}
& x^{2}-49=\frac{(x+7)(x-7)}{} \text { 26. } x^{2}-4=\frac{(x+2)(x-2)}{} \\
&=x^{2}-7^{2}= \\
&=x^{2}-2^{2}= \\
& \text { 23. } 36 x^{2}-25=(6 x+5)(6 x-5) \text { 24. } 4 x^{2}-81=(2 x+9)(2 x-9) \\
&=(6 x)^{2}-5^{2}==(2 x)^{2}-9^{2}=
\end{aligned}
\end{array}
$$

The Difference of Two Squares Factoring Pattern

$$
\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
21. $x^{2}-49=(x+7)(x-7)$
$=\mathrm{x}^{2}-\mathbf{7}^{2}=$
23. $36 x^{2}-25=(6 x+5)(6 x-5)$
$=(6 x)^{2}-5^{2}=$

$$
\text { 26. } \begin{aligned}
& x^{2}-4= \\
&=(x+2)(x-2) \\
& x^{2}-2^{2}=
\end{aligned}
$$

$$
\text { 24. } 4 x^{2}-81=(2 x+9)(2 x-9)
$$

$$
=(2 x)^{2}-9^{2}=
$$

The Difference of Two Squares Factoring Pattern

$$
\mathbf{A}^{2}-\mathbf{B}^{2}=(\mathbf{A}+\mathbf{B})(\mathbf{A}-\mathbf{B})
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$ 30. $(x+7)(x-5)=$ $\qquad$
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Notice that in each problem we are multiplying two binomials.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
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Notice that in each problem we are multiplying two binomials. The first term in each binomial is $x$.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$ 30. $(x+7)(x-5)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

Notice that in each problem we are multiplying two binomials. The first term in each binomial is $\mathbf{x}$. The second term is a number.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
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Notice that in each problem we are multiplying two binomials. The first term in each binomial is $\mathbf{x}$. The second term is a number.

$$
(x+A)(x+B)=
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
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Notice that in each problem we are multiplying two binomials. The first term in each binomial is $\mathbf{x}$. The second term is a number.

$$
(\mathbf{x}+\mathbf{A})(\mathbf{x}+\mathbf{B})=
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
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Notice that in each problem we are multiplying two binomials. The first term in each binomial is $x$. The second term is a number.

$$
(\underset{x}{x}+\mathbf{A})(\mathbf{x}+\mathbf{B})=\mathbf{x}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
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$$
(\mathbf{x}+\mathbf{A})(\mathrm{x}+\mathbf{B})=\mathbf{x}^{2}
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Notice that in each problem we are multiplying two binomials. The first term in each binomial is $\mathbf{x}$. The second term is a number.

$$
(\mathbf{x}+\mathbf{A})(\mathbf{x}+\mathbf{B})=\mathbf{x}^{2}+\mathbf{B x}
$$

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Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
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Notice that in each problem we are multiplying two binomials. The first term in each binomial is $x$. The second term is a number.

$$
(x+A)(x+B)=\mathbf{x}^{2}+\mathbf{B x}+\mathbf{A x}
$$

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Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
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(x+A)(x+B)=x^{2}+B x+A x
$$

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Notice that in each problem we are multiplying two binomials. The first term in each binomial is $x$. The second term is a number.

$$
(\mathbf{x}+\mathbf{A})(\mathbf{x}+\mathbf{B})=\mathbf{x}^{2}+\mathbf{B x}+\mathbf{A x}+\mathbf{A B}=
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
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$$
(\mathbf{x}+\mathbf{A})(\mathbf{x}+\mathbf{B})=\mathbf{x}^{2}+\mathbf{B x}+\mathbf{A x}+\mathbf{A B}=
$$

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Perform the indicated operations.
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31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

Notice that in each problem we are multiplying two binomials. The first term in each binomial is $x$. The second term is a number.

$$
(\mathbf{x}+\mathbf{A})(\mathbf{x}+\mathbf{B})=\mathbf{x}^{2}+\mathbf{B x}+\mathbf{A x}+\mathbf{A B}=\mathbf{x}^{2}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
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Notice that in each problem we are multiplying two binomials. The first term in each binomial is $x$. The second term is a number.

$$
(\mathbf{x}+\mathbf{A})(\mathbf{x}+\mathbf{B})=\mathbf{x}^{2}+\mathbf{B x}+\mathbf{A x}+\mathbf{A B}=\mathbf{x}^{2}+(\mathbf{A}+\mathbf{B}) \mathbf{x}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
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31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

Notice that in each problem we are multiplying two binomials. The first term in each binomial is $x$. The second term is a number.

$$
(\mathbf{x}+\mathbf{A})(\mathbf{x}+\mathbf{B})=\mathbf{x}^{2}+\mathbf{B x}+\mathbf{A x}+\mathbf{A B}=\mathbf{x}^{2}+(\mathbf{A}+\mathbf{B}) \mathbf{x}+\mathbf{A B}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
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29. $(x+6)(x-2)=$ $\qquad$ 30. $(x+7)(x-5)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

Notice that in each problem we are multiplying two binomials. The first term in each binomial is $x$. The second term is a number.

$$
(\mathbf{x}+\mathbf{A})(\mathbf{x}+\mathbf{B})=\mathbf{x}^{2}+\mathbf{B x}+\mathbf{A x}+\mathbf{A B}=\mathbf{x}^{2}+(\mathbf{A}+\mathbf{B}) \mathbf{x}+\mathbf{A B}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$ 30. $(x+7)(x-5)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

Notice that in each problem we are multiplying two binomials. The first term in each binomial is $x$. The second term is a number.

$$
\begin{gathered}
(x+A)(x+B)=x^{2}+B x+A x+A B=x^{2}+(A+B) x+A B \\
(x+A)(x+B)=x^{2}+(A+B) x+A B
\end{gathered}
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$
26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$ 30. $(x+7)(x-5)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$ 30. $(x+7)(x-5)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$ 30. $(x+7)(x-5)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $\mathbf{x}^{2}$.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$ 30. $(x+7)(x-5)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of $A$ and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$ 26. $(x+2)(x+7)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$ 30. $(x+7)(x-5)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=$ $\qquad$
27. $(x-4)(x-3)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}$
27. $(x-4)(x-3)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}$

A $=3$
27. $(x-4)(x-3)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}$
$A=3 \quad B=5$
27. $(x-4)(x-3)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}$

$$
A=3 \quad B=5 \quad A+B=8
$$

27. $(x-4)(x-3)=$ $\qquad$
28. $(x+6)(x-2)=$ $\qquad$
29. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of $A$ and B. Finally, notice that the last term is the product of $A$ and $B$.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x$
$A=3 \quad B=5 \quad A+B=8$
27. $(x-4)(x-3)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x$ $A=3 \quad B=5 \quad A+B=8 \quad A B=15$
27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$
31. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$
26. $(x+2)(x+7)=$ $\qquad$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
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29. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

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(x+A)(x+B)=x^{2}+(A+B) x+A B
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This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of $A$ and B. Finally, notice that the last term is the product of $A$ and $B$.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$
26. $(x+2)(x+7)=$ $\qquad$
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27. $(x-4)(x-3)=$ $\qquad$ 28. $(x-5)(x-6)=$ $\qquad$
29. $(x+6)(x-2)=$ $\qquad$
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Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}$
28. $(x+6)(x-2)=$ $\qquad$
29. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

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Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}$

$$
A=-4
$$

29. $(x+6)(x-2)=$ $\qquad$
30. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$
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$$
A=-4 \quad B=-3
$$

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$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}$

$$
A=-4 \quad B=-3 \quad A+B=-7
$$

29. $(x+6)(x-2)=$ $\qquad$
30. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

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25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x$

$$
A=-4 \quad B=-3 \quad A+B=-7
$$

29. $(x+6)(x-2)=$ $\qquad$
30. $(x-9)(x+2)=$ $\qquad$ 32. $(x-5)(x+1)=$ $\qquad$

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27. $(x-4)(x-3)=x^{2}-7 x$ $A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12$
29. $(x+6)(x-2)=$ $\qquad$
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$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
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27. $(x-4)(x-3)=x^{2}-7 x+12$

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25. $(x+3)(x+5)=x^{2}+8 x+15$
$A=3 \quad B=5 \quad A+B=8 \quad A B=15$
27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=$ $\qquad$
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Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$
$A=3 \quad B=5 \quad A+B=8 \quad A B=15$
26. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=$ $\qquad$
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## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=\frac{x^{2}+8 x+15}{8}$ $A=3 \quad B=5 \quad A+B=8 \quad A B=15$
26. $(x+2)(x+7)=x^{2}+9 x+14$ $A=2 \quad B=7 \quad A+B=9 \quad A B=14$
27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=$ $\qquad$
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25. $(x+3)(x+5)=\frac{x^{2}+8 x+15}{}$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
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29. $(x+6)(x-2)=$ $\qquad$
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A=3 \quad B=5 \quad A+B=8 \quad A B=15
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27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
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A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

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30. $(x-9)(x+2)=$ $\qquad$

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Perform the indicated operations.

$$
\begin{aligned}
& \text { 25. }(x+3)(x+5)=x^{2}+8 x+15 \\
& A=3 \quad B=5 \quad A+B=8 \quad A B=15 \\
& \text { 26. }(x+2)(x+7)=x^{2}+9 x+14 \\
& A=2 \quad B=7 \quad A+B=9 \quad A B=14 \\
& \text { 27. }(x-4)(x-3)=x^{2}-7 x+12 \\
& \text { 28. }(x-5)(x-6)=x^{2}-11 x+30 \\
& A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12 \\
& \text { 29. }(x+6)(x-2)=x^{2} \\
& A=6 \\
& \text { 31. }(x-9)(x+2)= \\
& \text { 32. }(x-5)(x+1)= \\
& (x+A)(x+B)=x^{2}+(A+B) x+A B
\end{aligned}
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

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& \text { 25. }(x+3)(x+5)=x^{2}+8 x+15 \\
& A=3 \quad B=5 \quad A+B=8 \quad A B=15 \\
& \text { 26. }(x+2)(x+7)=x^{2}+9 x+14 \\
& A=2 \quad B=7 \quad A+B=9 \quad A B=14 \\
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& \text { 28. }(x-5)(x-6)=x^{2}-11 x+30 \\
& A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12 \\
& \text { 29. }(x+6)(x-2)=x^{2} \\
& A=6 \quad B=-2 \\
& \text { 31. }(x-9)(x+2)= \\
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& (x+A)(x+B)=x^{2}+(A+B) x+A B
\end{aligned}
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This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

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$A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30$
33. $(x+7)(x-5)=x^{2}+2 x-35$
$A=7 \quad B=-5 \quad A+B=2 \quad A B=-35$
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25. $(x+3)(x+5)=\frac{x^{2}+8 x+15}{}$
$A=3 \quad B=5 \quad A+B=8 \quad A B=15$
27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=x^{2}+4 x-12$
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30. $(x-9)(x+2)=x^{2}-7 x$
$A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18$
31. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
32. $(x-5)(x-6)=x^{2}-11 x+30$
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30. $(x-9)(x+2)=x^{2}-7 x-18$
$A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18$
31. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
32. $(x-5)(x-6)=x^{2}-11 x+30$
$A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30$
33. $(x+7)(x-5)=x^{2}+2 x-35$
$A=7 \quad B=-5 \quad A+B=2 \quad A B=-35$
34. $(x-5)(x+1)=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=x^{2}+4 x-12$
$A=6 \quad B=-2 \quad A+B=4 \quad A B=-12$
30. $(x-9)(x+2)=x^{2}-7 x-18$
$A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18$
31. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
32. $(x-5)(x-6)=x^{2}-11 x+30$
$A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30$
33. $(x+7)(x-5)=x^{2}+2 x-35$
$A=7 \quad B=-5 \quad A+B=2 \quad A B=-35$
34. $(x-5)(x+1)=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=x^{2}+4 x-12$
$A=6 \quad B=-2 \quad A+B=4 \quad A B=-12$
30. $(x-9)(x+2)=x^{2}-7 x-18$
$A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18$
31. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
32. $(x-5)(x-6)=x^{2}-11 x+30$
$A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30$
33. $(x+7)(x-5)=x^{2}+2 x-35$
$A=7 \quad B=-5 \quad A+B=2 \quad A B=-35$
34. $(x-5)(x+1)=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=x^{2}+4 x-12$
$A=6 \quad B=-2 \quad A+B=4 \quad A B=-12$
30. $(x-9)(x+2)=x^{2}-7 x-18$
$A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18$
31. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
32. $(x-5)(x-6)=x^{2}-11 x+30$
$A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30$
33. $(x+7)(x-5)=x^{2}+2 x-35$
$A=7 \quad B=-5 \quad A+B=2 \quad A B=-35$
34. $(x-5)(x+1)=x^{2}$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=x^{2}+4 x-12$
$A=6 \quad B=-2 \quad A+B=4 \quad A B=-12$
30. $(x-9)(x+2)=x^{2}-7 x-18$
$A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18$
31. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
32. $(x-5)(x-6)=x^{2}-11 x+30$
$A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30$
33. $(x+7)(x-5)=x^{2}+2 x-35$
$A=7 \quad B=-5 \quad A+B=2 \quad A B=-35$
34. $(x-5)(x+1)=x^{2}$
$A=-5$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.

$$
\begin{aligned}
& \text { 25. }(x+3)(x+5)=x^{2}+8 x+15 \\
& A=3 \quad B=5 \quad A+B=8 \quad A B=15 \\
& \text { 27. }(x-4)(x-3)=x^{2}-7 x+12 \\
& A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12 \\
& \text { 29. }(x+6)(x-2)=x^{2}+4 x-12 \\
& A=6 \quad B=-2 \quad A+B=4 \quad A B=-12 \\
& \text { 31. }(x-9)(x+2)=x^{2}-7 x-18 \\
& A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18 \\
& \text { 26. }(x+2)(x+7)=x^{2}+9 x+14 \\
& A=2 \quad B=7 \quad A+B=9 \quad A B=14 \\
& \text { 28. }(x-5)(x-6)=x^{2}-11 x+30 \\
& A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30 \\
& \text { 30. }(x+7)(x-5)=x^{2}+2 x-35 \\
& A=7 \quad B=-5 \quad A+B=2 \quad A B=-35 \\
& \text { 32. }(x-5)(x+1)=x^{2} \\
& A=-5 \quad B=1 \\
& (x+A)(x+B)=x^{2}+(A+B) x+A B
\end{aligned}
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=x^{2}+4 x-12$
$A=6 \quad B=-2 \quad A+B=4 \quad A B=-12$
30. $(x-9)(x+2)=x^{2}-7 x-18$
$A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18$
31. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
32. $(x-5)(x-6)=x^{2}-11 x+30$
$A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30$
33. $(x+7)(x-5)=x^{2}+2 x-35$
$A=7 \quad B=-5 \quad A+B=2 \quad A B=-35$
34. $(x-5)(x+1)=x^{2}$
$A=-5 \quad B=1 \quad A+B=-4$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=x^{2}+4 x-12$
$A=6 \quad B=-2 \quad A+B=4 \quad A B=-12$
30. $(x-9)(x+2)=x^{2}-7 x-18$
$A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18$
31. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
32. $(x-5)(x-6)=x^{2}-11 x+30$
$A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30$
33. $(x+7)(x-5)=x^{2}+2 x-35$
$A=7 \quad B=-5 \quad A+B=2 \quad A B=-35$
34. $(x-5)(x+1)=x^{2}-4 x$
$A=-5 \quad B=1 \quad A+B=-4$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=x^{2}+4 x-12$
$A=6 \quad B=-2 \quad A+B=4 \quad A B=-12$
30. $(x-9)(x+2)=x^{2}-7 x-18$
$A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18$
31. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
32. $(x-5)(x-6)=x^{2}-11 x+30$
$A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30$
33. $(x+7)(x-5)=x^{2}+2 x-35$
$A=7 \quad B=-5 \quad A+B=2 \quad A B=-35$
34. $(x-5)(x+1)=x^{2}-4 x$
$A=-5 \quad B=1 \quad A+B=-4 \quad A B=-5$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=x^{2}+4 x-12$
$A=6 \quad B=-2 \quad A+B=4 \quad A B=-12$
30. $(x-9)(x+2)=x^{2}-7 x-18$
$A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18$
31. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
32. $(x-5)(x-6)=x^{2}-11 x+30$
$A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30$
33. $(x+7)(x-5)=x^{2}+2 x-35$
$A=7 \quad B=-5 \quad A+B=2 \quad A B=-35$
34. $(x-5)(x+1)=x^{2}-4 x-5$
$A=-5 \quad B=1 \quad A+B=-4 \quad A B=-5$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=x^{2}+4 x-12$
$A=6 \quad B=-2 \quad A+B=4 \quad A B=-12$
30. $(x-9)(x+2)=x^{2}-7 x-18$
$A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18$
31. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
32. $(x-5)(x-6)=x^{2}-11 x+30$
$A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30$
33. $(x+7)(x-5)=x^{2}+2 x-35$
$A=7 \quad B=-5 \quad A+B=2 \quad A B=-35$
34. $(x-5)(x+1)=x^{2}-4 x-5$
$A=-5 \quad B=1 \quad A+B=-4 \quad A B=-5$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Perform the indicated operations.
25. $(x+3)(x+5)=x^{2}+8 x+15$

$$
A=3 \quad B=5 \quad A+B=8 \quad A B=15
$$

27. $(x-4)(x-3)=x^{2}-7 x+12$

$$
A=-4 \quad B=-3 \quad A+B=-7 \quad A B=12
$$

29. $(x+6)(x-2)=x^{2}+4 x-12$
$A=6 \quad B=-2 \quad A+B=4 \quad A B=-12$
30. $(x-9)(x+2)=x^{2}-7 x-18$
$A=-9 \quad B=2 \quad A+B=-7 \quad A B=-18$
31. $(x+2)(x+7)=x^{2}+9 x+14$
$A=2 \quad B=7 \quad A+B=9 \quad A B=14$
32. $(x-5)(x-6)=\underline{x^{2}-11 x+30}$
$A=-5 \quad B=-6 \quad A+B=-11 \quad A B=30$
33. $(x+7)(x-5)=x^{2}+2 x-35$
$A=7 \quad B=-5 \quad A+B=2 \quad A B=-35$
34. $(x-5)(x+1)=x^{2}-4 x-5$
$A=-5 \quad B=1 \quad A+B=-4 \quad A B=-5$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

This pattern can be used to multiply two binomials of this type. Notice that the first term is $x^{2}$. The coefficient of the 'middle term', the $x$-term, is the sum of A and B. Finally, notice that the last term is the product of A and B.

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$ 34. $x^{2}+10 x+16=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$ 36. $x^{2}-15 x+56=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$ 38. $x^{2}-x-30=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$
34. $x^{2}+10 x+16=$ $\qquad$
36. $x^{2}-15 x+56=$ $\qquad$
38. $x^{2}-x-30=$ $\qquad$

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$ 34. $x^{2}+10 x+16=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$ 36. $x^{2}-15 x+56=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$ 38. $\mathrm{x}^{2}-\mathrm{x}-30=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'.

$$
(x+A)(x+B)=x^{2}+(A+B) x+A B
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$ 34. $x^{2}+10 x+16=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$ 36. $x^{2}-15 x+56=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$ 38. $\mathrm{x}^{2}-\mathrm{x}-30=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'.

$$
\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$ 34. $x^{2}+10 x+16=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$ 36. $x^{2}-15 x+56=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$ 38. $\mathrm{x}^{2}-\mathrm{x}-30=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $\mathbf{x}^{\mathbf{2}}$.

$$
\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$ 34. $x^{2}+10 x+16=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$ 36. $x^{2}-15 x+56=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$ 38. $\mathbf{x}^{2}-\mathbf{x}-\mathbf{3 0}=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $x^{2}$.

$$
\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$ 34. $x^{2}+10 x+16=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$ 36. $x^{2}-15 x+56=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$ 38. $\mathrm{x}^{2}-\mathrm{x}-30=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $\mathbf{x}^{\mathbf{2}}$.

$$
\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$ 34. $x^{2}+10 x+16=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$
36. $x^{2}-15 x+56=$ $\qquad$
38. $x^{2}-x-30=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $x^{2}$. The challenge is to find the numbers $A$ and $B$

$$
\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$ 34. $x^{2}+10 x+16=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$ 38. $x^{2}-x-30=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $x^{2}$. The challenge is to find the numbers $A$ and $B$

$$
\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$ 34. $x^{2}+10 x+16=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$ 38. $x^{2}-x-30=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $x^{2}$. The challenge is to find the numbers $A$ and $B$ such that their sum is the coefficient of $x$,

$$
\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$ 34. $x^{2}+10 x+16=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$ 38. $x^{2}-x-30=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $x^{2}$. The challenge is to find the numbers $A$ and $B$ such that their sum is the coefficient of $x$, the middle term,

$$
\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$ 34. $x^{2}+10 x+16=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$ 38. $x^{2}-x-30=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $x^{2}$. The challenge is to find the numbers $A$ and $B$ such that their sum is the coefficient of $x$, the middle term,

$$
\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$ 34. $x^{2}+10 x+16=$ $\qquad$
35. $x^{2}-4 x+3=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$ 38. $\mathbf{x}^{2}-\mathrm{x}-30=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $x^{2}$. The challenge is to find the numbers $A$ and $B$ such that their sum is the coefficient of $x$, the middle term, and their product is the constant term.

$$
\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=$ $\qquad$
$A+B=11$
35. $x^{2}-4 x+3=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$
34. $x^{2}+10 x+16=$ $\qquad$
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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
33. $x^{2}+11 x+28=(x+4)($
$A+B=11 \quad A B=28 \quad A=4 \quad B=7$
35. $x^{2}-4 x+3=$ $\qquad$
37. $x^{2}-4 x-12=$ $\qquad$
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| 33. $x^{2}+11 x+28=(x+4)(x+7)$ | 34. $x^{2}+10 x+16=(x+2)(x+8)$ |
| :---: | :---: |
| $A+B=11 \quad A B=28 \quad A=4 \quad B=7$ | $A+B=10 \quad A B=16 \quad A=2 \quad B=8$ |
| 35. $x^{2}-4 x+3=$ | 36. $x^{2}-15 x+56=$ |
| $A+B=-4 \quad A B=3$ |  |
| 37. $\mathrm{x}^{2}-4 \mathrm{x}-12=$ | 38. $\mathrm{x}^{2}-\mathrm{x}-30=$ |

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| :---: | :---: |
| $A+B=11 \quad A B=28 \quad A=4 \quad B=7$ | $A+B=10 \quad A B=16 \quad A=2 \quad B=8$ |
| 35. $x^{2}-4 x+3=\underline{(x-1)( }$ | 36. $x^{2}-15 x+56=$ |
| $A+B=-4 \quad A B=3 \quad A=-1 \quad B=-3$ |  |
| 37. $\mathrm{x}^{2}-4 x-12=$ | 38. $\mathrm{x}^{2}-\mathrm{x}-30=$ |

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37. $x^{2}-4 x-12=$ $\qquad$

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| :---: |
| $A+B=10 \quad A B=16 \quad A=2 \quad B=8$ |
| $\downarrow$ |
| 36. $\quad x^{2}-15 x+56=$ |
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\begin{aligned}
& \text { 34. } x^{2}+10 x+16=(x+2)(x+8) \\
& A+B=10 \quad A B=16 \quad A=2 B=8 \\
& \downarrow \\
& \text { 36. } x^{2}-15 x+56= \\
& A+B=-15 \quad A B=56
\end{aligned}
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& \text { 36. } x^{2}-15 x+56= \\
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The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $\mathbf{x}^{2}$. The challenge is to find the numbers $A$ and $B$ such that their sum is the coefficient of $x$, the middle term, and their product is the constant term.

$$
\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
39. $x^{2}+6 x-27=$
$A+B=6$
41. $x^{2}+10 x+25=$ $\qquad$
40. $x^{2}+7 x-18=$ $\qquad$
42. $x^{2}-14 x+49=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $\mathbf{x}^{2}$. The challenge is to find the numbers $A$ and $B$ such that their sum is the coefficient of $x$, the middle term, and their product is the constant term.

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\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
39. $x^{2}+6 x-27=$
$A+B=6 \quad A B=-27$
41. $x^{2}+10 x+25=$ $\qquad$
40. $x^{2}+7 x-18=$ $\qquad$
42. $x^{2}-14 x+49=$ $\qquad$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $x^{2}$. The challenge is to find the numbers $A$ and $B$ such that their sum is the coefficient of $x$, the middle term, and their product is the constant term.

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& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
39. $x^{2}+6 x-27=$
$A+B=6 \quad A B=-27 \quad A=9 \quad B=-3$
41. $x^{2}+10 x+25=$ $\qquad$
40. $\mathbf{x}^{2}+7 x-18=$ $\qquad$
42. $x^{2}-14 x+49=$ $\qquad$

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## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
39. $x^{2}+6 x-27=(x+9)($
$A+B=6 \quad A B=-27 \quad A=9 \quad B=-3$
41. $x^{2}+10 x+25=$ $\qquad$
40. $x^{2}+7 x-18=$ $\qquad$
42. $x^{2}-14 x+49=$ $\qquad$

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41. $x^{2}+10 x+25=$ $\qquad$
40. $\mathrm{x}^{2}+7 \mathrm{x}-18=$
$\mathrm{A}+\mathrm{B}=7$
42. $x^{2}-14 x+49=$ $\qquad$

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$A+B=7 \quad A B=\mathbf{- 1 8}$
42. $x^{2}-14 x+49=$ $\qquad$

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40. $x^{2}+7 x-18=$
$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$
42. $x^{2}-14 x+49=$ $\qquad$

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41. $x^{2}+10 x+25=$ $\qquad$

$$
\begin{aligned}
& \text { 40. } x^{2}+7 x-18=\frac{(x-2)( }{A+B=7 \quad A B=-18 \quad A=-2 B=9} \\
& A+B=1
\end{aligned}
$$

42. $x^{2}-14 x+49=$ $\qquad$

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Factor each of the following.
39. $x^{2}+6 x-27=(x+9)(x-3)$
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41. $\mathrm{x}^{2}+10 \mathrm{x}+25=$ $\qquad$
A $+\mathbf{B}=\mathbf{1 0}$
40. $x^{2}+7 x-18=(x-2)(x+9)$
$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$
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$A+B=10 \quad A B=25$
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$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$
42. $x^{2}-14 x+49=$ $\qquad$

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$A+B=6 \quad A B=-27 \quad A=9 \quad B=-3$
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$A+B=10 \quad A B=25 \quad A=5 \quad B=5$
40. $x^{2}+7 x-18=(x-2)(x+9)$
$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$
42. $x^{2}-14 x+49=$ $\qquad$

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\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

| 39. $x^{2}+6 x-27=\frac{(x+9)(x-3)}{}$ |  | 40. $x^{2}+7 x-18=\frac{(x-2)(x+9)}{}$ |
| :--- | :--- | :--- |
| $A+B=6 A B=-27 A=9 \quad B=-3$ |  | $A+B=7 \quad A B=-18 \quad A=-2 B=9$ |
| $\downarrow$ |  | 42. $x^{2}-14 x+49=$ |
| 41. $x^{2}+10 x+25=(x+5)($ |  |  |

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $x^{2}$. The challenge is to find the numbers $A$ and $B$ such that their sum is the coefficient of $x$, the middle term, and their product is the constant term.

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\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.
39. $x^{2}+6 x-27=(x+9)(x-3)$
$A+B=6 \quad A B=-27 \quad A=9 \quad B=-3$
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$A+B=10 \quad A B=25 \quad A=5 \quad B=5$
40. $x^{2}+7 x-18=(x-2)(x+9)$
$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$
42. $x^{2}-14 x+49=$ $\qquad$

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$A+B=10 \quad A B=25 \quad A=5 \quad B=5$
40. $x^{2}+7 x-18=(x-2)(x+9)$
$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$
42. $x^{2}-14 x+49=$ $\qquad$

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\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

$$
\begin{aligned}
\text { 39. } x^{2}+6 x-27 & =\frac{(x+9)(x-3)}{A+B}=6 \quad A B=-27 \quad A=9 \quad B=-3
\end{aligned}
$$

$$
A+B=10 \quad A B=25 \quad A=5 \quad B=5
$$

40. $x^{2}+7 x-18=(x-2)(x+9)$
$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$

$$
\text { 41. } x^{2}+10 x+25=(x+5)(x+5)
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41. $x^{2}+10 x+25=(x+5)(x+5)$
42. $\mathrm{x}^{2}-14 \mathrm{x}+49=$ $\qquad$

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Factor each of the following.
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41. $x^{2}+10 x+25=(x+5)(x+5)$
$A+B=10 \quad A B=25 \quad A=5 \quad B=5$
40. $x^{2}+7 x-18=(x-2)(x+9)$
$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$
42. $x^{2}-14 x+49=$
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The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $x^{2}$. The challenge is to find the numbers $A$ and $B$ such that their sum is the coefficient of $x$, the middle term, and their product is the constant term.

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$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$
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A+B=10 \quad A B=25 \quad A=5 \quad B=5
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40. $x^{2}+7 x-18=(x-2)(x+9)$
$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$
41. $\mathrm{x}^{2}-14 \mathrm{x}+49=$
$A+B=-14 \quad A B=49 \quad A=-7 \quad B=-7$

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$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$

$$
\text { 42. } x^{2}-14 x+49=(x-7)(
$$

$$
A+B=-14 \quad A B=49 \quad A=-7 \quad B=-7
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$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$

$$
\begin{aligned}
& \text { 42. } x^{2}-14 x+49=(x-7)(x-7) \\
& A+B=-14 \quad A B=49 \quad A=-7 \quad B=-7
\end{aligned}
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Factor each of the following.

$$
\begin{aligned}
\text { 39. } x^{2}+6 x-27 & =\frac{(x+9)(x-3)}{A+B}=6 \quad A B=-27 \quad A=9 \quad B=-3
\end{aligned}
$$

$$
\text { 41. } x^{2}+10 x+25=(x+5)(x+5)
$$

$$
A+B=10 \quad A B=25 \quad A=5 \quad B=5
$$

40. $x^{2}+7 x-18=(x-2)(x+9)$
$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$
41. $x^{2}-14 x+49=(x-7)(x-7)$
$A+B=-14 \quad A B=49 \quad A=-7 \quad B=-7$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $x^{2}$. The challenge is to find the numbers $A$ and $B$ such that their sum is the coefficient of $x$, the middle term, and their product is the constant term.

$$
\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Factor each of the following.

$$
\begin{aligned}
& \text { 39. } x^{2}+6 x-27=\frac{(x+9)(x-3)}{A+B=6 \quad A B=-27 A=9 B=-3}
\end{aligned}
$$

41. $x^{2}+10 x+25=(x+5)(x+5)$
$A+B=10 \quad A B=25 \quad A=5 \quad B=5$
42. $x^{2}+7 x-18=(x-2)(x+9)$
$A+B=7 \quad A B=-18 \quad A=-2 \quad B=9$

The pattern below can be used to factor trinomials of 'this type'. The first term of the trinomial is $x^{2}$. The challenge is to find the numbers $A$ and $B$ such that their sum is the coefficient of $x$, the middle term, and their product is the constant term.

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\begin{aligned}
& (x+A)(x+B)=x^{2}+(A+B) x+A B \\
& x^{2}+(A+B) x+A B=(x+A)(x+B)
\end{aligned}
$$

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
43. $x^{2}+3 x=0$
44. $2 x^{2}-10 x=0$
45. $15 x^{2}+20 x=0$

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
43. $x^{2}+3 x=0$
44. $2 x^{2}-10 x=0$
45. $15 x^{2}+20 x=0$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
43. $x^{2}+3 x=0$
44. $2 x^{2}-10 x=0$
45. $15 x^{2}+20 x=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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Use the factoring method to solve each of the following equations.
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## Algebra II Class Worksheet \#1 Unit 6

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Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
43. $x^{2}+3 x=0$
44. $2 x^{2}-10 x=0$
45. $15 x^{2}+20 x=0$

The equation is already in standard form.

Step 1: Write the equation in standard form: $A x^{2}+B x+C=0$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
43. $x^{2}+3 x=0$
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Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
43. $x^{2}+3 x=0$
44. $2 x^{2}-10 x=0$
45. $15 x^{2}+20 x=0$

$$
x(x+3)=0
$$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\text { 43. } x^{2}+3 x=0 \quad \text { 44. } 2 x^{2}-10 x=0 \quad \text { 45. } 15 x^{2}+20 x=0
$$

$$
x(x+3)=0
$$

Step 1: Write the equation in standard form: $A x^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
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Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 43. } x^{2}+3 x=0 \\
& x(x+3)=0 \\
& x=0 \text { or } x+3=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
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& x=0 \text { or } x+3=0
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\begin{aligned}
& \text { 43. } x^{2}+3 x=0 \\
& x(x+3)=0 \\
& x=0 \text { or } x+3=0 \\
& x=0 \text { or } x=-3
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 43. } x^{2}+3 x=0 \\
& \quad \text { 44. } 2 x^{2}-10 x=0 \\
& x(x+3)=0 \\
& x=0 \text { or } x+3=0 \\
& x=0 \text { or } x=-3
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
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Use the factoring method to solve each of the following equations.

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\begin{aligned}
& \text { 43. } x^{2}+3 x=0 \\
& x(x+3)=0 \\
& x=0 \text { or } x+3=0 \\
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\end{aligned}
$$

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Use the factoring method to solve each of the following equations.

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\begin{aligned}
& \text { 43. } x^{2}+3 x=0 \\
& \quad x(x+3)=0 \\
& x=0 \text { or } x+3=0 \\
& x=0 \text { or } x=-3
\end{aligned}
$$

Step 1: Write the equation in standard form: $A x^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{ll}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
\begin{array}{c}
x(x+3)=0
\end{array} & \text { 45. } 15 x^{2}+20 x=0 \\
x=0 \text { or } x+3=0 & \\
x=0 \text { or } x=-3 & \begin{array}{l}
\text { The equation is already } \\
\text { in standard form. }
\end{array}
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
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Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{l|l}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
x(x+3)=0 & \\
x=0 \text { or } x+3=0 \\
x=0 \text { or } x=-3 & \\
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 43. } x^{2}+3 x=0 \\
& x(x+3)=0
\end{aligned} \begin{aligned}
& 2 x^{2}-10 x=0 \\
& 2 x(x-5)=0 \\
& x=0 \text { or } x+3=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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\begin{aligned}
& \text { 43. } x^{2}+3 x=0 \\
& x(x+3)=0
\end{aligned} \begin{aligned}
& 2 x^{2}-10 x=0 \\
& 2 x(x-5)=0 \\
& x=0 \text { or } x+3=0 \\
& x=0 \text { or } x=-3
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
x(x+3)=0 & 2 x(x-5)=0 \\
x=0 \text { or } x+3=0 & 2 x=0 \text { or } x-5=0 \\
x=0 \text { or } x=-3 &
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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\begin{array}{cc}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
x(x+3)=0 & 2 x(x-5)=0 \\
x=0 \text { or } x+3=0 & 2 x=0 \text { or } x-5=0 \\
x=0 \text { or } x=-3 &
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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Use the factoring method to solve each of the following equations.

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\begin{array}{cc}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
x(x+3)=0 & 2 x(x-5)=0 \\
x=0 \text { or } x+3=0 & 2 x=0 \text { or } x-5=0 \\
x=0 \text { or } x=-3 & x=0 \text { or } x=5
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
x(x+3)=0 & 2 x(x-5)=0 \\
x=0 \text { or } x+3=0 & 2 x=0 \text { or } x-5=0 \\
x=0 \text { or } x=-3 & x=0 \text { or } x=5
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
2 x(x-5)=0 & \text { 45. } 15 x^{2}+20 x=0 \\
x(x+3)=0 & 2 x=0 \text { or } x-5=0 \\
x=0 \text { or } x+3=0 & x=0 \text { or } x=5
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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Use the factoring method to solve each of the following equations.

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\begin{array}{cc}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
2 x(x-5)=0 & \text { 45. } 15 x^{2}+20 x=0 \\
x(x+3)=0 & 2 x=0 \text { or } x-5=0 \\
x=0 \text { or } x+3=0 & x=0 \text { or } x=5
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x}{ }^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
x(x+3)=0 & 2 x(x-5)=0 \\
x=0 \text { or } x+3=0 & 2 x=0 \text { or } x-5=0 \\
x=0 \text { or } x=-3 & x=0 \text { or } x=5
\end{array}
$$

45. $15 x^{2}+20 x=0$

The equation is already in standard form.

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\begin{array}{cc}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
2 x(x-5)=0 & \text { 45. } 15 x^{2}+20 x=0 \\
x(x+3)=0 & 2 x=0 \text { or } x-5=0 \\
x=0 \text { or } x+3=0 & x=0 \text { or } x=5
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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Step 4: Solve each equation.

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Use the factoring method to solve each of the following equations.

$$
\begin{array}{ccc}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 & \text { 45. } 15 x^{2}+20 x=0 \\
x(x+3)=0 & 2 x(x-5)=0 & 5 x(3 x+4)=0 \\
x=0 \text { or } x+3=0 & 2 x=0 \text { or } x-5=0 & \\
x=0 \text { or } x=-3 & x=0 \text { or } x=5 &
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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$$
\begin{array}{ccc}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 & \text { 45. } 15 x^{2}+20 x=0 \\
x(x+3)=0 & 2 x(x-5)=0 & 5 x(3 x+4)=0 \\
x=0 \text { or } x+3=0 & 2 x=0 \text { or } x-5=0 & \\
x=0 \text { or } x=-3 & x=0 \text { or } x=5 &
\end{array}
$$

Step 1: Write the equation in standard form: $A x^{2}+B x+C=0$
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\begin{array}{cc}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
x(x+3)=0 & 2 x(x-5)=0 \\
x=0 \text { or } x+3=0 & 2 x=0 \text { or } x-5=0 \\
x=0 \text { or } x=-3 & x=0 \text { or } x=5
\end{array}
$$

$$
\begin{aligned}
& \text { 45. } 15 x^{2}+20 x=0 \\
& 5 x(3 x+4)=0 \\
& 5 x=0 \text { or } 3 x+4=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
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Use the factoring method to solve each of the following equations.

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\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
x(x+3)=0 & 2 x(x-5)=0 \\
x=0 \text { or } x+3=0 & 2 x=0 \text { or } x-5=0 \\
x=0 \text { or } x=-3 & x=0 \text { or } x=5
\end{array}
$$

$$
\begin{aligned}
& \text { 45. } 15 x^{2}+20 x=0 \\
& 5 x(3 x+4)=0 \\
& 5 x=0 \text { or } 3 x+4=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{ccr}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 & \text { 45. } 15 x^{2}+20 x=0 \\
x(x+3)=0 & 2 x(x-5)=0 & 5 x(3 x+4)=0 \\
x=0 \text { or } x+3=0 & 2 x=0 \text { or } x-5=0 & 5 x=0 \text { or } 3 x+4=0 \\
x=0 \text { or } x=-3 & x=0 \text { or } x=5 & 3 x=-4
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 \\
x(x+3)=0 & 2 x(x-5)=0 \\
x=0 \text { or } x+3=0 & 2 x=0 \text { or } x-5=0 \\
x=0 \text { or } x=-3 & x=0 \text { or } x=5
\end{array}
$$

$$
\begin{aligned}
& \text { 45. } 15 x^{2}+20 x=0 \\
& 5 x(3 x+4)=0 \\
& 5 x=0 \text { or } 3 x+4=0 \\
& 3 x=-4 \\
& x=0 \text { or } x=\frac{-4}{3}
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{ccc}
\text { 43. } x^{2}+3 x=0 & \text { 44. } 2 x^{2}-10 x=0 & \text { 45. } 15 x^{2}+20 x=0 \\
x(x+3)=0 & 2 x(x-5)=0 & 5 x(3 x+4)=0 \\
x=0 \text { or } x+3=0 & 2 x=0 \text { or } x-5=0 & 5 x=0 \text { or } 3 x+4=0 \\
x=0 \text { or } x=-3 & x=0 \text { or } x=5 & 3 x=-4 \\
& & x=0 \text { or } x=\frac{-4}{3}
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
46. $9 x^{2}-3 x=0$
47. $x^{2}-64=0$
48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
46. $9 x^{2}-3 x=0$
47. $x^{2}-64=0$
48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
46. $9 x^{2}-3 x=0$
47. $x^{2}-64=0$
48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
46. $9 x^{2}-3 x=0$
47. $x^{2}-64=0$
48. $9 x^{2}-49=0$

The equation is already in standard form.

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
46. $9 x^{2}-3 x=0$
47. $x^{2}-64=0$
48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $A x^{2}+B x+C=0$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
46. $9 x^{2}-3 x=0$
47. $x^{2}-64=0$
48. $9 x^{2}-49=0$
$3 x(3 x-1)=0$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathrm{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
46. $9 x^{2}-3 x=0$
47. $x^{2}-64=0$
48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $A x^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
46. $9 x^{2}-3 x=0$
47. $x^{2}-64=0$
48. $9 x^{2}-49=0$
$3 x(3 x-1)=0$
$3 \mathrm{x}=0$ or $3 \mathrm{x}-1=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
46. $9 x^{2}-3 x=0$
47. $x^{2}-64=0$
48. $9 x^{2}-49=0$
$3 x(3 x-1)=0$
$3 \mathrm{x}=0$ or $3 \mathrm{x}-1=0$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
46. $9 x^{2}-3 x=0$
47. $x^{2}-64=0$
48. $9 x^{2}-49=0$
$3 x(3 x-1)=0$
$3 x=0$ or $3 x-1=0$
$3 \mathrm{x}=1$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 46. } 9 x^{2}-3 x=0 \\
& 3 x(3 x-1)=0 \\
& 3 x=0 \text { or } 3 x-1=0 \\
& 3 x=1 \\
& x=0 \text { or } x=\frac{1}{3}
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 46. } 9 x^{2}-3 x=0 \\
& 3 x(3 x-1)=0 \\
& 3 x=0 \text { or } 3 x-1=0 \\
& \quad 3 x=1 \\
& x=0 \text { or } x=\frac{1}{3}
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 46. } 9 x^{2}-3 x=0 \\
3 x(3 x-1)=0 \\
3 x=0 \text { or } 3 x-1=0 \\
3 x=1 \\
x=0 \text { or } x=\frac{1}{3}
\end{gathered}
$$

48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $A x^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 46. } 9 x^{2}-3 x=0 \\
3 x(3 x-1)=0 \\
3 x=0 \text { or } 3 x-1=0 \\
3 x=1 \\
x=0 \text { or } x=\frac{1}{3}
\end{gathered}
$$

48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $\mathbf{A x}{ }^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 46. } 9 x^{2}-3 x=0 \\
3 x(3 x-1)=0 \\
3 x=0 \text { or } 3 x-1=0 \\
3 x=1 \\
x=0 \text { or } x=\frac{1}{3}
\end{gathered}
$$

47. $x^{2}-64=0$

The equation is already in standard form.
48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 46. } 9 x^{2}-3 x=0 \\
3 x(3 x-1)=0 \\
3 x=0 \text { or } 3 x-1=0 \\
3 x=1 \\
x=0 \text { or } x=\frac{1}{3}
\end{gathered}
$$

48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 46. } 9 x^{2}-3 x=0 \\
3 x(3 x-1)=0 \\
3 x=0 \text { or } 3 x-1=0 \\
3 x=1 \\
(x+8)(x-8)=0 \\
x=0 \text { or } x=\frac{1}{3}
\end{gathered}
$$

48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 46. } 9 x^{2}-3 x=0 \\
3 x(3 x-1)=0 \\
3 x=0 \text { or } 3 x-1=0 \\
3 x=1 \\
(x+8)(x-8)=0 \\
x=0 \text { or } x=\frac{1}{3}
\end{gathered}
$$

48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 46. } 9 x^{2}-3 x=0 \\
3 x(3 x-1)=0 \\
3 x=0 \text { or } 3 x-1=0 \\
3 x=1 \\
x=0 \text { or } x=\frac{1}{3}
\end{gathered}
$$

48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $A x^{2}+B x+C=0$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 46. } 9 x^{2}-3 x=0 \\
3 x(3 x-1)=0 \\
3 x=0 \text { or } 3 x-1=0 \\
3 x=1 \\
x=0 \text { or } x=\frac{1}{3}
\end{gathered}
$$

48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 \\
3 x=1 & x=-8 \text { or } x=8 \\
x=0 \text { or } x=\frac{1}{3} &
\end{array}
$$

48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $A x^{2}+B x+C=0$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathrm{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 \\
3 x=1 & x=-8 \text { or } x=8 \\
x=0 \text { or } x=\frac{1}{3} &
\end{array}
$$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathrm{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 \\
3 x=1 & x=-8 \text { or } x=8 \\
x=0 \text { or } x=\frac{1}{3} &
\end{array}
$$

48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 \\
3 x=1 & x=-8 \text { or } x=8 \\
x=0 \text { or } x=\frac{1}{3} &
\end{array}
$$



Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 \\
3 x=1 & x=-8 \text { or } x=8 \\
x=0 \text { or } x=\frac{1}{3} &
\end{array}
$$

48. $9 x^{2}-49=0$

The equation is already in standard form.

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 \\
3 x=1 & x=-8 \text { or } x=8 \\
x=0 \text { or } x=\frac{1}{3} &
\end{array}
$$

48. $9 x^{2}-49=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 \\
3 x=1 & x=-8 \text { or } x=8 \\
x=0 \text { or } x=\frac{1}{3} &
\end{array}
$$

48. $9 x^{2}-49=0$
$(3 x+7)(3 x-7)=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\left.\mathbf{A x}^{2}+\mathbf{B x}+\mathrm{C}.\right)$
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 \\
3 x=1 & x=-8 \text { or } x=8 \\
x=0 \text { or } x=\frac{1}{3} &
\end{array}
$$

48. $9 x^{2}-49=0$
$(3 x+7)(3 x-7)=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 \\
3 x=1 & x=-8 \text { or } x=8 \\
x=0 \text { or } x=\frac{1}{3} &
\end{array}
$$

$$
\begin{gathered}
\text { 48. } 9 x^{2}-49=0 \\
(3 x+7)(3 x-7)=0 \\
3 x+7=0 \text { or } 3 x-7=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $A x^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 \\
3 x=1 & x=-8 \text { or } x=8 \\
x=0 \text { or } x=\frac{1}{3} &
\end{array}
$$

$$
\begin{gathered}
\text { 48. } 9 x^{2}-49=0 \\
(3 x+7)(3 x-7)=0 \\
3 x+7=0 \text { or } 3 x-7=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathrm{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 \\
3 x=1 & x=-8 \text { or } x=8 \\
x=0 \text { or } x=\frac{1}{3} &
\end{array}
$$

$$
\begin{gathered}
\text { 48. } 9 x^{2}-49=0 \\
(3 x+7)(3 x-7)=0 \\
3 x+7=0 \text { or } 3 x-7=0 \\
3 x=-7 \text { or } 3 x=7
\end{gathered}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
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Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\begin{array}{cc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 \\
3 x=1 & x=-8 \text { or } x=8 \\
x=0 \text { or } x=\frac{1}{3} &
\end{array}
$$

$$
\begin{gathered}
\text { 48. } 9 x^{2}-49=0 \\
(3 x+7)(3 x-7)=0 \\
3 x+7=0 \text { or } 3 x-7=0 \\
3 x=-7 \text { or } 3 x=7 \\
x=\frac{-7}{3} \text { or } x=\frac{7}{3}
\end{gathered}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{ccc}
\text { 46. } 9 x^{2}-3 x=0 & \text { 47. } x^{2}-64=0 & \text { 48. } 9 x^{2}-49=0 \\
3 x(3 x-1)=0 & (x+8)(x-8)=0 & (3 x+7)(3 x-7)=0 \\
3 x=0 \text { or } 3 x-1=0 & x+8=0 \text { or } x-8=0 & 3 x+7=0 \text { or } 3 x-7=0 \\
3 x=1 & x=-8 \text { or } x=8 & 3 x=-7 \text { or } 3 x=7 \\
x=0 \text { or } x=\frac{1}{3} & & x=-\frac{7}{3} \text { or } x=\frac{7}{3}
\end{array}
$$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
49. $25 x^{2}-1=0$
50. $x^{2}+8 x+12=0$
51. $x^{2}+11 x+24=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
49. $25 x^{2}-1=0 \quad$ 50. $x^{2}+8 x+12=0 \quad$ 51. $x^{2}+11 x+24=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
49. $25 x^{2}-1=0$
50. $x^{2}+8 x+12=0$
51. $x^{2}+11 x+24=0$

Step 1: Write the equation in standard form: $A x^{2}+B x+C=0$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
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Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
49. $25 x^{2}-1=0 \quad$ 50. $x^{2}+8 x+12=0 \quad$ 51. $x^{2}+11 x+24=0$

The equation is already in standard form.

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
49. $25 x^{2}-1=0$
50. $x^{2}+8 x+12=0$
51. $x^{2}+11 x+24=0$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
49. $25 x^{2}-1=0$
50. $x^{2}+8 x+12=0$
51. $x^{2}+11 x+24=0$
$(5 \mathrm{x}+1)(5 \mathrm{x}-1)=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
49. $25 x^{2}-1=0$
50. $x^{2}+8 x+12=0$
51. $\mathrm{x}^{2}+11 \mathrm{x}+24=0$
$(5 \mathrm{x}+1)(5 \mathrm{x}-1)=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \begin{array}{l}
\text { 49. } 25 x^{2}-1=0 \\
(5 x+1)(5 x-1)=0 \\
5 x+1=0 \text { or } 5 x-1=0
\end{array} \\
& \begin{array}{l}
\text { 50. } x^{2}+8 x+12=0 \\
\text { 51. } x^{2}+11 x+24=0
\end{array}
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
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Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \begin{array}{l}
\text { 49. } 25 x^{2}-1=0 \\
(5 x+1)(5 x-1)=0 \\
5 x+1=0 \text { or } 5 x-1=0
\end{array} \\
& \begin{array}{l}
\text { 50. } x^{2}+8 x+12=0 \\
\text { 51. } x^{2}+11 x+24=0
\end{array}
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 49. } 25 x^{2}-1=0 \quad \text { 50. } x^{2}+8 x+12=0 \\
& (5 x+1)(5 x-1)=0 \\
& 5 x+1=0 \text { or } 5 x-1=0 \\
& 5 x=-1 \text { or } 5 x=1
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
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Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 49. } 25 x^{2}-1=0 \quad \text { 50. } x^{2}+8 x+12=0 \\
& \begin{array}{l}
(5 x+1)(5 x-1)=0 \\
5 x+1=0 \text { or } 5 x-1=0 \\
5 x=-1 \text { or } 5 x=1 \\
x=\frac{-1}{5} \text { or } x=\frac{1}{5}
\end{array}
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 49. } 25 x^{2}-1=0 \\
& (5 x+1)(5 x-1)=0 \\
& 5 x+1=0 \text { or } 5 x-1=0 \\
& 5 x=-1 \text { or } 5 x=1 \\
& x=-\frac{1}{5} \text { or } x=\frac{1}{5}
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 49. } 25 x^{2}-1=0 \\
(5 x+1)(5 x-1)=0 \\
5 x+1=0 \text { or } 5 x-1=0 \\
5 x=-1 \text { or } 5 x=1 \\
x=\frac{-1}{5} \text { or } x=\frac{1}{5}
\end{gathered}
$$

$$
\text { 50. } x^{2}+8 x+12=0
$$

$$
\text { 51. } x^{2}+11 x+24=0
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
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Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 49. } 25 x^{2}-1=0 \\
(5 x+1)(5 x-1)=0 \\
5 x+1=0 \text { or } 5 x-1=0 \\
5 x=-1 \text { or } 5 x=1 \\
x=\frac{-1}{5} \text { or } x=\frac{1}{5}
\end{gathered}
$$

$$
\text { 50. } x^{2}+8 x+12=0
$$

$$
\text { 51. } x^{2}+11 x+24=0
$$

Step 1: Write the equation in standard form: $\mathbf{A x}{ }^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
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Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 49. } 25 x^{2}-1=0 \\
(5 x+1)(5 x-1)=0 \\
5 x+1=0 \text { or } 5 x-1=0 \\
5 x=-1 \text { or } 5 x=1 \\
x=\frac{-1}{5} \text { or } x=\frac{1}{5}
\end{gathered}
$$

The equation is already in standard form.
51. $x^{2}+11 x+24=0$
50. $x^{2}+8 x+12=0$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=0$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 49. } 25 x^{2}-1=0 \\
(5 x+1)(5 x-1)=0 \\
5 x+1=0 \text { or } 5 x-1=0 \\
5 x=-1 \text { or } 5 x=1 \\
x=\frac{-1}{5} \text { or } x=\frac{1}{5}
\end{gathered}
$$

$$
\text { 50. } x^{2}+8 x+12=0
$$

$$
\text { 51. } x^{2}+11 x+24=0
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{l|l|l}
\text { 49. } 25 x^{2}-1=0 & \text { 50. } x^{2}+8 x+12=0 & \text { 51. } x^{2}+11 x+24=0 \\
(5 x+1)(5 x-1)=0 & (x+2)(x+6)=0 & \\
5 x+1=0 \text { or } 5 x-1=0 & \\
5 x=-1 \text { or } 5 x=1 & \\
x=\frac{-1}{5} \text { or } x=\frac{1}{5} &
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 49. } 25 x^{2}-1=0 \\
& (5 x+1)(5 x-1)=0
\end{aligned} \quad \begin{array}{r}
\text { 50. } x^{2}+8 x+12=0 \\
(x+2)(x+6)=0 \\
5 x+1=0 \text { or } 5 x-1=0
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
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Use the factoring method to solve each of the following equations.

$$
\begin{array}{c|c|c}
\text { 49. } 25 x^{2}-1=0 & \text { 50. } x^{2}+8 x+12=0 & \text { 51. } x^{2}+11 x+24=0 \\
(5 x+1)(5 x-1)=0 & (x+2)(x+6)=0 & \\
5 x+1=0 \text { or } 5 x-1=0 & x+2=0 \text { or } x+6=0 \\
5 x=-1 \text { or } 5 x=1 & \\
x=\frac{-1}{5} \text { or } x=\frac{1}{5} &
\end{array}
$$

Step 1: Write the equation in standard form: $A x^{2}+B x+C=0$
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(5 x+1)(5 x-1)=0 & (x+2)(x+6)=0 \\
5 x+1=0 \text { or } 5 x-1=0 & x+2=0 \text { or } x+6=0 \\
5 x=-1 \text { or } 5 x=1 & \\
x=-\frac{1}{5} \text { or } x=\frac{1}{5} &
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
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Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{gathered}
\text { 49. } 25 x^{2}-1=0 \\
(5 x+1)(5 x-1)=0 \\
5 x+1=0 \text { or } 5 x-1=0 \\
5 x=-1 \text { or } 5 x=1 \\
x=\frac{-1}{5} \text { or } x=\frac{1}{5}
\end{gathered}
$$

$$
\begin{aligned}
& \text { 50. } x^{2}+8 x+12=0 \\
& (x+2)(x+6)=0 \\
& x+2=0 \text { or } x+6=0 \\
& x=-2 \text { or } x=-6
\end{aligned}
$$

Step 1: Write the equation in standard form: $A x^{2}+B x+C=0$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{ccc}
\text { 49. } 25 x^{2}-1=0 & \text { 50. } x^{2}+8 x+12=0 & \text { 51. } x^{2}+11 x+24=0 \\
(5 x+1)(5 x-1)=0 & (x+2)(x+6)=0 \\
5 x+1=0 \text { or } 5 x-1=0 & x+2=0 \text { or } x+6=0 \\
5 x=-1 \text { or } 5 x=1 & x=-2 \text { or } x=-6 \\
x=-\frac{1}{5} \text { or } x=\frac{1}{5} &
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 49. } 25 x^{2}-1=0 & \text { 50. } x^{2}+8 x+12=0 \\
(5 x+1)(5 x-1)=0 & (x+2)(x+6)=0 \\
5 x+1=0 \text { or } 5 x-1=0 & x+2=0 \text { or } x+6=0 \\
5 x=-1 \text { or } 5 x=1 & x=-2 \text { or } x=-6 \\
x=\frac{1}{5} \text { or } x=\frac{1}{5} &
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

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\begin{array}{cc}
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5 x+1=0 \text { or } 5 x-1=0 & x+2=0 \text { or } x+6=0 \\
5 x=-1 \text { or } 5 x=1 & x=-2 \text { or } x=-6 \\
x=-\frac{1}{5} \text { or } x=\frac{1}{5} &
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x}{ }^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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## Algebra II Class Worksheet \#1 Unit 6

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5 x+1=0 \text { or } 5 x-1=0 & x+2=0 \text { or } x+6=0 \\
5 x=-1 \text { or } 5 x=1 & x=-2 \text { or } x=-6 \\
x=\frac{-1}{5} \text { or } x=\frac{1}{5} &
\end{array}
$$

51. $x^{2}+11 x+24=0$

The equation is already in standard form.

Step 1: Write the equation in standard form: $A x^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
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Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\begin{array}{cc}
\text { 49. } 25 x^{2}-1=0 & \text { 50. } x^{2}+8 x+12=0 \\
(5 x+1)(5 x-1)=0 & (x+2)(x+6)=0 \\
5 x+1=0 \text { or } 5 x-1=0 & \text { 51. } x^{2}+11 x+24=0 \\
5 x=-1 \text { or } 5 x=1 & x=-2 \text { or } x=-6 \\
x=-\frac{1}{5} \text { or } x=\frac{1}{5} &
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{ccc}
\text { 49. } 25 x^{2}-1=0 & \text { 50. } x^{2}+8 x+12=0 & \text { 51. } x^{2}+11 x+24=0 \\
(5 x+1)(5 x-1)=0 & (x+2)(x+6)=0 & (x+3)(x+8)=0 \\
5 x+1=0 \text { or } 5 x-1=0 & x+2=0 \text { or } x+6=0 & \\
5 x=-1 \text { or } 5 x=1 & x=-2 \text { or } x=-6 \\
x=-\frac{1}{5} \text { or } x=\frac{1}{5} & &
\end{array}
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Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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\begin{array}{ccc}
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5 x+1=0 \text { or } 5 x-1=0 & x+2=0 \text { or } x+6=0 & \\
5 x=-1 \text { or } 5 x=1 & x=-2 \text { or } x=-6 & \\
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5 x+1=0 \text { or } 5 x-1=0 & x+2=0 \text { or } x+6=0 & x+3=0 \text { or } x+8=0 \\
5 x=-1 \text { or } 5 x=1 & x=-2 \text { or } x=-6 & \\
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5 x=-1 \text { or } 5 x=1 & x=-2 \text { or } x=-6 & \\
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Use the factoring method to solve each of the following equations.

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\text { 52. } x^{2}-13 x+30=0 \quad \text { 53. } x^{2}-9 x+20=0 \quad \text { 54. } x^{2}-5 x-36=0
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 52. } x^{2}-13 x+30=0 \\
& (x-3)(x-10)=0 \\
& x-3=0 \text { or } x-10=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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& x-3=0 \text { or } x-10=0
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Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 52. } x^{2}-13 x+30=0 \\
& \begin{array}{l}
(x-3)(x-10)=0 \\
x-3=0 \text { or } x-10=0 \\
x=3 \text { or } x=10
\end{array} \\
& \quad \begin{array}{l}
\text { 53. } x^{2}-9 x+20=0 \\
\text { 54. } x^{2}-5 x-36=0
\end{array} \\
& x
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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& \begin{array}{l}
(x-3)(x-10)=0 \\
x-3=0 \text { or } x-10=0 \\
x=3 \text { or } x=10
\end{array} \\
& \quad \begin{array}{l}
x^{2}-9 x+20=0 \\
\text { 54. } x^{2}-5 x-36=0
\end{array} \\
& x
\end{aligned}
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Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\begin{aligned}
& \text { 52. } x^{2}-13 x+30=0 \\
& \begin{array}{l}
(x-3)(x-10)=0 \\
x-3=0 \text { or } x-10=0 \\
x=3 \text { or } x=10
\end{array} \\
& x+9 x+20=0 \\
& \text { 54. } x^{2}-5 x-36=0 \\
& x
\end{aligned}
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$$
\begin{aligned}
& \text { 52. } x^{2}-13 x+30=0 \\
& \begin{array}{l}
(x-3)(x-10)=0 \\
x-3=0 \text { or } x-10=0 \\
x-3 \\
x=3 \text { or } x=10
\end{array} \\
& x+20=0 \\
& x^{2}-9 x+2 . x^{2}-5 x-36=0 \\
&
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x}{ }^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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\begin{array}{c}
(x-3)(x-10)=0
\end{array} \\
\begin{array}{cl}
x-3=0 \text { or } x-10=0 \\
x=3 \text { or } x=10 & \\
& \begin{array}{l}
\text { The equation is already } \\
\text { in standard form. }
\end{array}
\end{array}
\end{array}
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\begin{array}{ccc}
\text { 52. } x^{2}-13 x+30=0 & \text { 53. } x^{2}-9 x+20=0 & \text { 54. } x^{2}-5 x-36=0 \\
(x-3)(x-10)=0 & (x-5)(x-4)=0 &
\end{array}
$$

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\end{array}
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Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{c|cc}
\text { 52. } x^{2}-13 x+30=0 & \text { 53. } x^{2}-9 x+20=0 & \text { 54. } x^{2}-5 x-36=0 \\
(x-3)(x-10)=0 & (x-5)(x-4)=0 \\
x-3=0 \text { or } x-10=0 & x-5=0 \text { or } x-4=0 \\
x=3 \text { or } x=10 & x=5 \text { or } x=4
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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Step 3: Apply the 'zero property of multiplication.

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\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
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Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

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x=3 \text { or } x=10 & x=5 \text { or } x=4
\end{array}
$$

54. $x^{2}-5 x-36=0$

The equation is already in standard form.

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.
55. $x^{2}-4 x-45=0$
56. $x^{2}+6 x-16=0$
57. $x^{2}+3 x-10=0$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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Use the factoring method to solve each of the following equations.
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 55. } x^{2}-4 x-45=0 \\
& (x-9)(x+5)=0 \\
& x-9=0 \text { or } x+5=0
\end{aligned}
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Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\text { The equation is already } \\
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& x-x^{2}+6 x-16=0 \\
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& x=9 \text { or } x=-5
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\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{c|c|c}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 & \text { 57. } x^{2}+3 x-10=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 \\
x=9 \text { or } x=-5 & &
\end{array}
$$

Step 1: Write the equation in standard form: $A x^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathrm{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{c|c|c}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 & \text { 57. } x^{2}+3 x-10=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 \\
x=9 \text { or } x=-5 & x=2 \text { or } x=-8 &
\end{array}
$$

Step 1: Write the equation in standard form: $A x^{2}+B x+C=0$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathrm{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\begin{array}{ccc}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 & \text { 57. } x^{2}+3 x-10=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 \\
x=9 \text { or } x=-5 & x=2 \text { or } x=-8
\end{array}
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Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\begin{array}{cc}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 \\
x=9 \text { or } x=-5 & x=2 \text { or } x=-8
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
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(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=0$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\begin{array}{cc}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 \\
x=9 \text { or } x=-5 & x=2 \text { or } x=-8
\end{array}
$$

Step 1: Write the equation in standard form: $A x^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathrm{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\begin{array}{cc|c}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 & \text { 57. } x^{2}+3 x-10=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 & \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 & \\
x=9 \text { or } x=-5 & x=2 \text { or } x=-8 & \text { The equation is already } \\
& & \begin{array}{l}
\text { in standard form. }
\end{array}
\end{array}
$$

Step 1: Write the equation in standard form: $A x^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\begin{array}{cc}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 \\
x=9 \text { or } x=-5 & x=2 \text { or } x=-8
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\begin{array}{cc}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 \\
x=9 \text { or } x=-5 & x=2 \text { or } x=-8
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 \\
x=9 \text { or } x=-5 & x=2 \text { or } x=-8
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

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\begin{array}{ccc}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 & \text { 57. } x^{2}+3 x-10=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 & (x+5)(x-2)=0 \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 & x+5=0 \text { or } x-2=0 \\
x=9 \text { or } x=-5 & x=2 \text { or } x=-8 &
\end{array}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathrm{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{ccc}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 & \text { 57. } x^{2}+3 x-10=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 & (x+5)(x-2)=0 \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 & x+5=0 \text { or } x-2=0 \\
x=9 \text { or } x=-5 & x=2 \text { or } x=-8 &
\end{array}
$$

Step 1: Write the equation in standard form: $A x^{2}+B x+C=0$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathrm{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{cc|c}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 & \text { 57. } x^{2}+3 x-10=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 & (x+5)(x-2)=0 \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 & x+5=0 \text { or } x-2=0 \\
x=9 \text { or } x=-5 & x=2 \text { or } x=-8 & x=-5 \text { or } x=2
\end{array}
$$

Step 1: Write the equation in standard form: $A x^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathrm{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{ccc}
\text { 55. } x^{2}-4 x-45=0 & \text { 56. } x^{2}+6 x-16=0 & \text { 57. } x^{2}+3 x-10=0 \\
(x-9)(x+5)=0 & (x-2)(x+8)=0 & (x+5)(x-2)=0 \\
x-9=0 \text { or } x+5=0 & x-2=0 \text { or } x+8=0 & x+5=0 \text { or } x-2=0 \\
x=9 \text { or } x=-5 & x=2 \text { or } x=-8 & x=-5 \text { or } x=2
\end{array}
$$

Step 1: Write the equation in standard form: $A x^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\text { 58. } x^{2}+x-90=0 \quad \text { 59. } x^{2}+8 x+16=0 \quad \text { 60. } x^{2}-10 x+25=0
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\text { 58. } x^{2}+x-90=0 \quad \text { 59. } x^{2}+8 x+16=0 \quad \text { 60. } x^{2}-10 x+25=0
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\text { 58. } x^{2}+x-90=0 \quad \text { 59. } x^{2}+8 x+16=0 \quad \text { 60. } x^{2}-10 x+25=0
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\text { 58. } x^{2}+x-90=0 \quad \text { 59. } x^{2}+8 x+16=0 \quad \text { 60. } x^{2}-10 x+25=0
$$

The equation is already in standard form.

Step 1: Write the equation in standard form: $A x^{2}+B x+C=0$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\text { 58. } x^{2}+x-90=0 \quad \text { 59. } x^{2}+8 x+16=0 \quad \text { 60. } x^{2}-10 x+25=0
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
\text { 58. } x^{2}+x-90 & =0 \\
(x-9)(x+10) & =0
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
\text { 58. } x^{2}+x-90 & =0 \\
(x-9)(x+10) & =0
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 58. } x^{2}+x-90=0 \\
& (x-9)(x+10)=0 \\
& x-9=0 \text { or } x+10=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 58. } x^{2}+x-90=0 \\
& (x-9)(x+10)=0 \\
& x-9=0 \text { or } x+10=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 58. } x^{2}+x-90=0 \\
& (x-9)(x+10)=0 \\
& x-9=0 \text { or } x+10=0 \\
& x=9 \text { or } x=-10
\end{aligned}
$$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $\mathbf{P Q}=\mathbf{0}$, then $\mathbf{P}=\mathbf{0}$ or $\mathbf{Q}=\mathbf{0}$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 58. } x^{2}+x-90=0 \\
& (x-9)(x+10)=0 \\
& x-9=0 \text { or } x+10=0 \\
& x=9 \text { or } x=-10
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 58. } x^{2}+x-90=0 \\
& (x-9)(x+10)=0 \\
& x-9=0 \text { or } x+10=0 \\
& x=9 \text { or } x=-10
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 58. } x^{2}+x-90=0 \\
& (x-9)(x+10)=0 \\
& x-9=0 \text { or } x+10=0 \\
& x=9 \text { or } x=-10 \\
& x
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x}{ }^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\left.\begin{array}{r|l|l}
\text { 58. } x^{2}+x-90=0 & \text { 59. } x^{2}+8 x+16=0 & \text { 60. } x^{2}-10 x+25=0 \\
\begin{array}{c}
(x-9)(x+10)=0 \\
x-9=0
\end{array} & \\
x=9 \text { or } x+10=0
\end{array}\right)
$$

Step 1: Write the equation in standard form: $A x^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 58. } x^{2}+x-90=0 \\
& (x-9)(x+10)=0 \\
& x-9=0 \text { or } x+10=0 \\
& x=9 \text { or } x=-10 \\
& x
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{A x} \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{c|c|c}
\text { 58. } x^{2}+x-90=0 & \text { 59. } x^{2}+8 x+16=0 & \text { 60. } x^{2}-10 x+25=0 \\
(x-9)(x+10)=0 & (x+4)(x+4)=0 \\
x-9=0 \text { or } x+10=0 & \\
x=9 \text { or } x=-10 &
\end{array}
$$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } P Q=0 \text {, then } P=0 \text { or } Q=0
$$

Step 4: Solve each equation.

## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{aligned}
& \text { 58. } x^{2}+x-90=0 \\
& (x-9)(x+10)=0 \\
& \text { 59. } x^{2}+8 x+16=0 \\
& \text { 60. } x^{2}-10 x+25=0 \\
& (x+4)(x+4)=0 \\
& x-9=0 \text { or } x+10=0 \\
& x=9 \text { or } x=-10
\end{aligned}
$$

Step 1: Write the equation in standard form: $A \mathbf{x}^{2}+\mathbf{B x}+\mathbf{C}=\mathbf{0}$
Step 2: Write the equation in factored form.
(Factor the polynomial $\mathbf{A x}^{2}+\mathbf{B x}+\mathbf{C}$.)
Step 3: Apply the 'zero property of multiplication. If $P Q=0$, then $P=0$ or $Q=0$.
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## Algebra II Class Worksheet \#1 Unit 6

Use the factoring method to solve each of the following equations.

$$
\begin{array}{ccc}
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The equation is already in standard form.

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