Algebra I Lesson \#2 Unit 12 Class Worksheet \#2 For Worksheets \#2 \& \#3

## Solving Second Degree Equations With 1 Variable

## Solving Second Degree Equations With 1 Variable The Factoring Method

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 1. } 2 x^{2}=13 x+7
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

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\end{aligned}
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$$
\begin{aligned}
& \text { 1. } 2 x^{2}=13 x+7 \\
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& (2 x \quad)(x \quad)=0
\end{aligned}
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\begin{array}{r}
\text { 1. } 2 x^{2}=13 x+7 \\
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(2 x+1)(x-7)=0 \\
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\end{array}
$$

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\begin{gathered}
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$2 x^{2}-13 x-7=0$
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$2 x+1=0$ or $x-7=0$
$2 x=$

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\text { 1. } 2 x^{2}=13 x+7 \\
2 x^{2}-13 x-7=0 \\
(2 x+1)(x-7)=0 \\
2 x+1=0 \text { or } x-7=0 \\
2 x=-1
\end{gathered}
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\text { 2. } 6 x^{2}+13 x=5
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2. $6 x^{2}+13 x=5$

$$
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& (3 x \quad)(2 x \quad)=0
\end{aligned}
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6 x^{2}+13 x-5=0 \\
(3 x-1)(2 x+5)=0 \\
3 x-1=0 \text { or } 2 x+5=0 \\
3 x=1
\end{gathered}
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3 x=1 \\
x=
\end{gathered}
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6 x^{2}+13 x-5=0 \\
(3 x-1)(2 x+5)=0 \\
3 x-1=0 \text { or } 2 x+5=0 \\
3 x=1 \\
x=1 / 3
\end{gathered}
$$

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## The Factoring Method

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\begin{gathered}
\text { 2. } 6 x^{2}+13 x=5 \\
6 x^{2}+13 x-5=0 \\
(3 x-1)(2 x+5)=0 \\
3 x-1=0 \text { or } 2 x+5=0 \\
3 x=1 \quad 2 x=-5 \\
x=1 / 3
\end{gathered}
$$

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
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(3 x-1)(2 x+5)=0 \\
3 x-1=0 \quad \text { or } 2 x+5=0 \\
3 x=1 \quad 2 x=-5 \\
x=1 / 3 \quad \text { or } x=
\end{gathered}
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3 x=1 \quad 2 x=-5 \\
x=1 / 3 \quad \text { or } x=-5 / 2
\end{gathered}
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Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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\begin{gathered}
\text { 2. } 6 x^{2}+13 x=5 \\
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(3 x-1)(2 x+5)=0 \\
3 x-1=0 \quad \text { or } 2 x+5=0 \\
3 x=1 \quad 2 x=-5 \\
x=1 / 3 \quad \text { or } x=-5 / 2
\end{gathered}
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Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

3. $x^{2}=9$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

3. $x^{2}=9$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

 The Factoring Method

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

 The Factoring Method

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

 The Factoring Method

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

 The Factoring Method

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

3. $x^{2}=9$

$$
x^{2}-9=0
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 3. } x^{2}=9 \\
x^{2}-9=0 \\
(x \quad)(x \quad)=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 4. } x^{2}=9 x
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 4. } x^{2}=9 x
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

4. $x^{2}=9 x$
$\mathbf{x}^{2}$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

4. $x^{2}=9 x$
$\mathbf{x}^{2}-$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } \quad x^{2}=9 x \\
& x^{2}-9 x
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 4. } \begin{gathered}
x^{2}=9 x \\
x^{2}-9 x=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 4. } \begin{gathered}
x^{2}=9 x \\
x^{2}-9 x=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method



Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 4. } \begin{gathered}
x^{2}=9 x \\
x^{2}-9 x=0 \\
x(x-9)
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 4. } \begin{gathered}
x^{2}=9 x \\
x^{2}-9 x=0 \\
x(x-9)=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 4. } \begin{gathered}
x^{2}=9 x \\
x^{2}-9 x=0 \\
x(x-9)=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } \begin{array}{c}
x^{2}=9 x \\
x^{2}-9 x=0 \\
x(x-9)=0
\end{array} \\
& x=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } \begin{array}{c}
x^{2}=9 x \\
x^{2}-9 x=0 \\
x(x-9)=0 \\
x=0
\end{array}
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } \begin{array}{c}
x^{2}=9 x \\
x^{2}-9 x=0 \\
x(x-9)=0 \\
x=0
\end{array} \text { or }
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 4. } \mathbf{x}^{2}=9 x \\
\mathbf{x}^{2}-9 x=0 \\
\\
\mathbf{x}(\mathbf{x}-9)=0 \\
\mathbf{x}=0 \quad \text { or } \mathbf{x}-9=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 4. } x^{2}=9 x \\
x^{2}-9 x=0 \\
x(x-9)=0 \\
x=0 \quad \text { or } x-9=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 4. } \mathbf{x}^{2}=9 x \\
x^{2}-9 x=0 \\
x(x-9)=0 \\
x=0 \text { or } x-9=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } x^{2}=9 x \\
& x^{2}-9 x=0 \\
& x(x-9)=0 \\
& x=0 \text { or } x-9=0 \\
& x=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } x^{2}=9 x \\
& x^{2}-9 x=0 \\
& x(x-9)=0 \\
& x=0 \quad \text { or } x-9=0 \\
& x=0 \quad \text { or }
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 4. } x^{2}=9 x \\
x^{2}-9 x=0 \\
x(x-9)=0 \\
x=0 \quad \text { or } x-9=0 \\
x=0 \quad \text { or } x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 4. } x^{2}=9 x \\
x^{2}-9 x=0 \\
x(x-9)=0 \\
x=0 \quad \text { or } x-9=0 \\
x=0 \quad \text { or } x=9
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 4. } x^{2}=9 x \\
x^{2}-9 x=0 \\
x(x-9)=0 \\
x=0 \quad \text { or } x-9=0 \\
x=0 \quad \text { or } x=9
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

5. $x^{2}+5=6 x$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

5. $x^{2}+5=6 x$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 5. } x^{2}+5=6 x \\
& x^{2}
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 5. } x^{2}+5=6 x \\
& x^{2}-
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 5. } x^{2}+5=6 x \\
& x^{2}-6 x
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 5. } \quad x^{2}+5=6 x \\
& x^{2}-6 x+
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 5. } x^{2}+5=6 x \\
& x^{2}-6 x+5
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 5. } \quad x^{2}+5=6 x \\
& x^{2}-6 x+5=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 5. } \quad x^{2}+5=6 x \\
& x^{2}-6 x+5=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 5. } x^{2}+5=6 x \\
& x^{2}-6 x+5=0 \\
& (x \quad)(x \quad)=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } x^{2}+5=6 x \\
x^{2}-6 x+5=0 \\
(x-1)(x-5)=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } x^{2}+5=6 x \\
x^{2}-6 x+5=0 \\
(x-1)(x-5)=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 5. } x^{2}+5=6 x \\
& x^{2}-6 x+5=0 \\
& (x-1)(x-5)=0 \\
& x-1=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } x^{2}+5=6 x \\
x^{2}-6 x+5=0 \\
(x-1)(x-5)=0 \\
x-1=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } x^{2}+5=6 x \\
x^{2}-6 x+5=0 \\
(x-1)(x-5)=0 \\
x-1=0 \text { or }
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } x^{2}+5=6 x \\
x^{2}-6 x+5=0 \\
(x-1)(x-5)=0 \\
x-1=0 \text { or } x-5=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } x^{2}+5=6 x \\
x^{2}-6 x+5=0 \\
(x-1)(x-5)=0 \\
x-1=0 \text { or } x-5=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } x^{2}+5=6 x \\
x^{2}-6 x+5=0 \\
(x-1)(x-5)=0 \\
x-1=0 \text { or } x-5=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } x^{2}+5=6 x \\
x^{2}-6 x+5=0 \\
(x-1)(x-5)=0 \\
x-1=0 \text { or } x-5=0 \\
x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 5. } x^{2}+5=6 x \\
& x^{2}-6 x+5=0 \\
& (x-1)(x-5)=0 \\
& x-1=0 \text { or } x-5=0 \\
& x=1
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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\begin{gathered}
\text { 5. } x^{2}+5=6 x \\
x^{2}-6 x+5=0 \\
(x-1)(x-5)=0 \\
x-1=0 \text { or } x-5=0 \\
x=1 \text { or }
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
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Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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\begin{gathered}
\text { 5. } x^{2}+5=6 x \\
x^{2}-6 x+5=0 \\
(x-1)(x-5)=0 \\
x-1=0 \quad \text { or } x-5=0 \\
x=1 \quad \text { or } x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
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## The Factoring Method

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\begin{gathered}
\text { 5. } x^{2}+5=6 x \\
x^{2}-6 x+5=0 \\
(x-1)(x-5)=0 \\
x-1=0 \quad \text { or } x-5=0 \\
x=1 \text { or } x=5
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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\begin{gathered}
\text { 5. } x^{2}+5=6 x \\
x^{2}-6 x+5=0 \\
(x-1)(x-5)=0 \\
x-1=0 \quad \text { or } x-5=0 \\
x=1 \quad \text { or } x=5
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 6. } 8 x^{2}+15=26 x
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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\text { 6. } 8 x^{2}+15=26 x
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method



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## Solving Second Degree Equations With 1 Variable

## The Factoring Method



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## Solving Second Degree Equations With 1 Variable

## The Factoring Method



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## The Factoring Method



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## The Factoring Method



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## Solving Second Degree Equations With 1 Variable

## The Factoring Method



Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 6. } \begin{gathered}
8 x^{2}+15=26 x \\
8 x^{2}-26 x+15=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

6. $8 x^{2}+15=26 x$

$$
\left.\begin{array}{rl}
8 x^{2}-26 x+15 & =0 \\
(4 x & )(2 x
\end{array}\right)=0
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

6. $8 x^{2}+15=26 x$

$$
\begin{array}{r}
8 x^{2}-26 x+15=0 \\
(4 x-3)(2 x-5)=0
\end{array}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
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## The Factoring Method

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Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } 8 x^{2}+15=26 x \\
& 8 x^{2}-26 x+15=0 \\
& (4 x-3)(2 x-5)=0 \\
& 4 x-3=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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& (4 x-3)(2 x-5)=0 \\
& 4 x-3=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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& 8 x^{2}-26 x+15=0 \\
& (4 x-3)(2 x-5)=0 \\
& 4 x-3=0 \text { or }
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## The Factoring Method

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\begin{gathered}
8 x^{2}+15=26 x \\
8 x^{2}-26 x+15=0 \\
(4 x-3)(2 x-5)=0 \\
4 x-3=0 \text { or } 2 x-5=
\end{gathered}
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Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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8 x^{2}-26 x+15=0 \\
(4 x-3)(2 x-5)=0 \\
4 x-3=0 \text { or } 2 x-5=0
\end{gathered}
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8 x^{2}-26 x+15=0 \\
(4 x-3)(2 x-5)=0 \\
4 x-3=0 \text { or } 2 x-5=0
\end{gathered}
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8 x^{2}-26 x+15=0 \\
(4 x-3)(2 x-5)=0 \\
4 x-3=0 \text { or } 2 x-5=0 \\
4 x=
\end{gathered}
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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\begin{gathered}
\text { 6. } 8 x^{2}+15=26 x \\
8 x^{2}-26 x+15=0 \\
(4 x-3)(2 x-5)=0 \\
4 x-3=0 \text { or } 2 x-5=0 \\
4 x=3
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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4 x=3 \\
x=
\end{gathered}
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\begin{gathered}
\text { 6. } 8 x^{2}+15=26 x \\
8 x^{2}-26 x+15=0 \\
(4 x-3)(2 x-5)=0 \\
4 x-3=0 \text { or } 2 x-5=0 \\
4 x=3 \\
x=3 / 4
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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\begin{aligned}
& \text { 6. } 8 x^{2}+15=26 x \\
& 8 x^{2}-26 x+15=0 \\
& (4 x-3)(2 x-5)=0 \\
& 4 x-3=0 \text { or } 2 x-5=0 \\
& 4 \mathrm{x}=3 \quad 2 \mathrm{x}= \\
& \mathrm{x}=3 / 4
\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'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

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\text { 6. } 8 x^{2}+15=26 x \\
8 x^{2}-26 x+15=0 \\
(4 x-3)(2 x-5)=0 \\
4 x-3=0 \quad \text { or } 2 x-5=0 \\
4 x=3
\end{gathered} \quad 2 x=5 .
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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\text { 6. } 8 x^{2}+15=26 x \\
8 x^{2}-26 x+15=0 \\
(4 x-3)(2 x-5)=0 \\
4 x-3=0 \quad \text { or } 2 x-5=0 \\
4 x=3 \quad 2 x=5 \\
x=3 / 4 \quad \text { or }
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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8 x^{2}-26 x+15=0 \\
(4 x-3)(2 x-5)=0 \\
4 x-3=0 \quad \text { or } 2 x-5=0 \\
4 x=3 \quad 2 x=5 \\
x=3 / 4 \quad \text { or } x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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\begin{aligned}
& \text { 6. } 8 x^{2}+15=26 x \\
& 8 x^{2}-26 x+15=0 \\
& (4 x-3)(2 x-5)=0 \\
& 4 x-3=0 \text { or } 2 x-5=0 \\
& 4 x=3 \quad 2 x=5 \\
& x=3 / 4 \quad \text { or } \quad x=5 / 2
\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'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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\begin{aligned}
& \text { 6. } 8 x^{2}+15=26 x \\
& 8 x^{2}-26 x+15=0 \\
& (4 x-3)(2 x-5)=0 \\
& 4 x-3=0 \text { or } 2 x-5=0 \\
& 4 x=3 \quad 2 x=5 \\
& x=3 / 4 \quad \text { or } \quad x=5 / 2
\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'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 7. } 15 x^{2}+x=2
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

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\text { 7. } 15 x^{2}+x=2
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method



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## Solving Second Degree Equations With 1 Variable

## The Factoring Method



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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 7. } \quad 15 x^{2}+x=2 \\
& 15 x^{2}+x
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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\begin{aligned}
& \text { 7. } \quad 15 x^{2}+x=2 \\
& 15 x^{2}+x-
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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\begin{aligned}
& \text { 7. } 15 x^{2}+x=2 \\
& 15 x^{2}+x-2
\end{aligned}
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\end{aligned}
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\begin{aligned}
& \text { 7. } \quad 15 x^{2}+x=2 \\
& 15 x^{2}+x-2=0
\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'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } 15 x^{2}+x=2 \\
15 x^{2}+x-2=0 \\
(3 x \quad)(5 x \quad)=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } 15 x^{2}+x=2 \\
15 x^{2}+x-2=0 \\
(3 x-1)(5 x+2)=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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\begin{gathered}
\text { 7. } 15 x^{2}+x=2 \\
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(3 x-1)(5 x+2)=0
\end{gathered}
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Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 7. } 15 x^{2}+x=2 \\
& 15 x^{2}+x-2=0 \\
& (3 x-1)(5 x+2)=0 \\
& 3 x-1=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
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Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 7. } 15 x^{2}+x=2 \\
& 15 x^{2}+x-2=0 \\
& (3 x-1)(5 x+2)=0 \\
& 3 x-1=0 \text { or }
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

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## The Factoring Method

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\begin{gathered}
\text { 7. } 15 x^{2}+x=2 \\
15 x^{2}+x-2=0 \\
(3 x-1)(5 x+2)=0 \\
3 x-1=0 \text { or } 5 x+2=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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\begin{gathered}
\text { 7. } 15 x^{2}+x=2 \\
15 x^{2}+x-2=0 \\
(3 x-1)(5 x+2)=0 \\
3 x-1=0 \text { or } 5 x+2=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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\begin{gathered}
\text { 7. } 15 x^{2}+x=2 \\
15 x^{2}+x-2=0 \\
(3 x-1)(5 x+2)=0 \\
3 x-1=0 \text { or } 5 x+2=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

7. $15 x^{2}+x=2$
$15 x^{2}+x-2=0$
$(3 x-1)(5 x+2)=0$
$3 x-1=0$ or $5 x+2=0$
$3 x=$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
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Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } 15 x^{2}+x=2 \\
15 x^{2}+x-2=0 \\
(3 x-1)(5 x+2)=0 \\
3 x-1=0 \quad \text { or } 5 x+2=0 \\
3 x=1
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } 15 x^{2}+x=2 \\
15 x^{2}+x-2=0 \\
(3 x-1)(5 x+2)=0 \\
3 x-1=0 \text { or } 5 x+2=0 \\
3 x=1 \\
x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } 15 x^{2}+x=2 \\
15 x^{2}+x-2=0 \\
(3 x-1)(5 x+2)=0 \\
3 x-1=0 \text { or } 5 x+2=0 \\
3 x=1 \\
x=1 / 3
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 7. } 15 x^{2}+x=2 \\
& 15 x^{2}+x-2=0 \\
& (3 x-1)(5 x+2)=0 \\
& 3 x-1=0 \quad \text { or } 5 x+2=0 \\
& 3 \mathrm{x}=1 \quad 5 \mathrm{x}= \\
& \mathrm{x}=1 / 3
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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& 15 x^{2}+x-2=0 \\
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& x=1 / 3 \text { or }
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& 3 \mathrm{x}=1 \quad 5 \mathrm{x}=-2 \\
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\end{aligned}
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& (3 x-1)(5 x+2)=0 \\
& 3 x-1=0 \text { or } 5 x+2=0 \\
& 3 \mathrm{x}=1 \quad 5 \mathrm{x}=-2 \\
& x=1 / 3 \text { or } x=-2 / 5
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## The Factoring Method

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& (3 x-1)(5 x+2)=0 \\
& 3 x-1=0 \quad \text { or } 5 x+2=0 \\
& 3 \mathrm{x}=1 \quad 5 \mathrm{x}=-2 \\
& x=1 / 3 \text { or } x=-2 / 5
\end{aligned}
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Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

8. $8 x(2 x-1)=15$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
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Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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\text { 8. } 8 x(2 x-1)=15
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Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method



Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method



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Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$8 x(2 x-1)=15$
$16 x^{2}-8 x=$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
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Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$8 x(2 x-1)=15$
$16 x^{2}-8 x=15$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$8 x(2 x-1)=15$
$16 x^{2}-8 x=15$
$16 x^{2}$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method



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## The Factoring Method

$8 x(2 x-1)=15$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method



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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$8 x(2 x-1)=15$
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$16 x^{2}-8 x-15$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$8 x(2 x-1)=15$
$16 x^{2}-8 x=15$
$16 x^{2}-8 x-15=0$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$8 x(2 x-1)=15$
$16 x^{2}-8 x=15$
$16 x^{2}-8 x-15=0$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

8. $8 x(2 x-1)=15$

$$
\begin{gathered}
16 x^{2}-8 x=15 \\
16 x^{2}-8 x-15=0 \\
(4 x \quad)(4 x \quad)=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## The Factoring Method

$$
\begin{aligned}
& \text { 8. } 8 x(2 x-1)=15 \\
& 16 x^{2}-8 x=15 \\
& 16 x^{2}-8 x-15=0 \\
& (4 x-5)(4 x+3)=0 \\
& 4 x-5=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{array}{r}
8.8 x(2 x-1)=15 \\
16 x^{2}-8 x=15 \\
16 x^{2}-8 x-15=0 \\
(4 x-5)(4 x+3)=0 \\
4 x-5=0
\end{array}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 8. } 8 x(2 x-1)=15 \\
& 16 x^{2}-8 x=15 \\
& 16 x^{2}-8 x-15=0 \\
& (4 x-5)(4 x+3)=0 \\
& 4 x-5=0 \text { or }
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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\begin{gathered}
\text { 8. } 8 x(2 x-1)=15 \\
16 x^{2}-8 x=15 \\
16 x^{2}-8 x-15=0 \\
(4 x-5)(4 x+3)=0 \\
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\end{gathered}
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16 x^{2}-8 x=15 \\
16 x^{2}-8 x-15=0 \\
(4 x-5)(4 x+3)=0 \\
4 x-5=0 \text { or } 4 x+3=0 \\
4 x=5
\end{gathered}
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Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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16 x^{2}-8 x=15 \\
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(4 x-5)(4 x+3)=0 \\
4 x-5=0 \quad \text { or } 4 x+3=0 \\
4 x=5 \\
x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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\begin{gathered}
\text { 8. } 8 x(2 x-1)=15 \\
16 x^{2}-8 x=15 \\
16 x^{2}-8 x-15=0 \\
(4 x-5)(4 x+3)=0 \\
4 x-5=0 \quad \text { or } 4 x+3=0 \\
4 x=5 \\
x=5 / 4
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
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Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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\begin{aligned}
& \text { 8. } 8 x(2 x-1)=15 \\
& 16 x^{2}-8 x=15 \\
& 16 x^{2}-8 x-15=0 \\
& (4 x-5)(4 x+3)=0 \\
& 4 x-5=0 \text { or } 4 x+3=0 \\
& 4 x=5 \quad 4 x= \\
& x=5 / 4
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

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\begin{gathered}
8 \mathrm{x}(2 \mathrm{x}-1)=15 \\
16 x^{2}-8 \mathrm{x}=15 \\
16 x^{2}-8 x-15=0 \\
(4 x-5)(4 x+3)=0 \\
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& 16 x^{2}-8 x-15=0 \\
& (4 x-5)(4 x+3)=0 \\
& 4 x-5=0 \text { or } 4 x+3=0 \\
& 4 x=5 \quad 4 x=-3 \\
& x=5 / 4 \quad \text { or }
\end{aligned}
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Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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\begin{gathered}
\text { 8. } 8 x(2 x-1)=15 \\
16 x^{2}-8 x=15 \\
16 x^{2}-8 x-15=0 \\
(4 x-5)(4 x+3)=0 \\
4 x-5=0 \quad \text { or } 4 x+3=0 \\
4 x=5
\end{gathered} \quad 4 x=-3 .
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
8 \mathrm{8x}(2 \mathrm{x}-1)=15 \\
16 x^{2}-8 x=15 \\
16 x^{2}-8 x-15=0 \\
(4 x-5)(4 x+3)=0 \\
4 x-5=0 \quad \text { or } 4 x+3=0 \\
4 x=5
\end{gathered} \quad 4 x=-3 .
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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16 x^{2}-8 x=15 \\
16 x^{2}-8 x-15=0 \\
(4 x-5)(4 x+3)=0 \\
4 x-5=0 \quad \text { or } 4 x+3=0 \\
4 x=5
\end{gathered} \quad 4 x=-3 .
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## Solving Second Degree Equations With 1 Variable

 The Factoring Method$$
\text { 9. } x^{2}+7 x-3=3(2 x-1)
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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Step 3: Apply the 'zero property of multiplication.
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 9. } x^{2}+7 x-3=3(2 x-1) \\
& x^{2}+7 x-3=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

 The Factoring Method$$
\begin{aligned}
& \text { 9. } x^{2}+7 x-3=3(2 x-1) \\
& x^{2}+7 x-3=6 x
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

 The Factoring Method$$
\begin{gathered}
\text { 9. } \quad x^{2}+7 x-3=3(2 x-1) \\
x^{2}+7 x-3=6 x-
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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\begin{gathered}
\text { 9. } x^{2}+7 x-3=3(2 x-1) \\
x^{2}+7 x-3=6 x-3
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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 The Factoring Method

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 The Factoring Method

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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 9. } \quad x^{2}+7 x-3=3(2 x-1) \\
& x^{2}+7 x-3=6 x-3 \\
& x^{2}+x
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 9. } \quad \begin{gathered}
x^{2}+7 x-3=3(2 x-1) \\
x^{2}+7 x-3=6 x-3 \\
x^{2}+x=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

9. $x^{2}+7 x-3=3(2 x-1)$

$$
x^{2}+7 x-3=6 x-3
$$

$$
x^{2}+x=0
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
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## The Factoring Method

$$
\text { 9. } \quad x^{2}+7 x-3=3(2 x-1) ~ 子 \begin{gathered}
x^{2}+7 x-3=6 x-3 \\
x^{2}+x=0 \\
x(x+1)
\end{gathered}
$$

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

9. $x^{2}+7 x-3=3(2 x-1)$

$$
x^{2}+7 x-3=6 x-3
$$

$$
\mathbf{x}^{2}+\mathbf{x}=\mathbf{0}
$$

$$
\mathbf{x}(\mathbf{x}+\mathbf{1})=\mathbf{0}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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$$
x^{2}+7 x-3=6 x-3
$$

$$
\mathbf{x}^{2}+\mathbf{x}=\mathbf{0}
$$

$$
\mathbf{x}(\mathbf{x}+\mathbf{1})=\mathbf{0}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
Step 3: Apply the 'zero property of multiplication.
Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 9. } x^{2}+7 x-3=3(2 x-1) \\
& x^{2}+7 x-3=6 x-3 \\
& x^{2}+x=0 \\
& x(x+1)=0 \\
& x=
\end{aligned}
$$

Step 1: Write the equation in standard form: $\mathbf{a x}{ }^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
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Step 4: Solve each equation.

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$$
\text { 9. } \quad x^{2}+7 x-3=3(2 x-1) ~ 子 \begin{gathered}
x^{2}+7 x-3=6 x-3 \\
x^{2}+x=0 \\
x(x+1)=0 \\
x=0
\end{gathered}
$$

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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 9. } \begin{gathered}
x^{2}+7 x-3=3(2 x-1) \\
x^{2}+7 x-3=6 x-3 \\
x^{2}+x=0 \\
x(x+1)=0 \\
x=0 \text { or }
\end{gathered}
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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

10. $4 x^{2}+5 x+1=5(x+2)$

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## Solving Second Degree Equations With 1 Variable

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4 x^{2}+5 x+1=5 x
$$

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4 x^{2}+5 x+1=5 x+
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## Solving Second Degree Equations With 1 Variable

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$$
4 x^{2}+5 x+1=5 x+10
$$

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## Solving Second Degree Equations With 1 Variable

## The Factoring Method



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## Solving Second Degree Equations With 1 Variable

## The Factoring Method

10. $\begin{gathered}4 x^{2}+5 x+1=5(x+2) \\ 4 x^{2}+5 x+1=5 x+10 \\ 4 x^{2}-9\end{gathered}$

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$$
(2 x \quad)(2 x \quad)=0
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x=-3 / 2
\end{gathered}
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\end{gathered}
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## Solving Second Degree Equations With 1 Variable

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$$
\begin{aligned}
& 4 x^{2}+5 x+1=5 x+10 \\
& 4 x^{2}-9=0 \\
& (2 x+3)(2 x-3)=0 \\
& 2 \mathrm{x}+3=0 \text { or } 2 \mathrm{x}-3=0 \\
& 2 \mathrm{x}=-3 \quad 2 \mathrm{x}=3 \\
& x=-3 / 2 \text { or } x=3 / 2
\end{aligned}
$$

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& 2 \mathrm{x}+3=0 \text { or } 2 \mathrm{x}-3=0 \\
& 2 \mathrm{x}=-3 \quad 2 \mathrm{x}=3 \\
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\end{gathered}
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## Good luck on your homework !!!

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x=-3 / 2 \text { or } x=3 / 2
$$

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