Algebra I Lesson \#1 Unit 12 Class Worksheet \#1 For Worksheets \#1 \& \#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 Method1. $x^{2}-5 x+4=0$

## Solving Second Degree Equations With 1 Variable

 The Factoring Method1. $x^{2}-5 x+4=0$

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

## Solving Second Degree Equations With 1 Variable

 The Factoring Method$$
\text { 1. } x^{2}-5 x+4=0
$$

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

This equation is already in standard form.

## Solving Second Degree Equations With 1 Variable

 The Factoring Method1. $x^{2}-5 x+4=0$

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 $a^{2}+b x+c$.)

## Solving Second Degree Equations With 1 Variable

 The Factoring Method1. $x^{2}-5 x+4=0$
$(\mathrm{x} \quad)(\mathrm{x} \quad)=\mathbf{0}$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

1. $x^{2}-5 x+4=0$

$$
(x-1)(x-4)=0
$$

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 $\mathbf{a x}^{2}+b x+c$. )

## Solving Second Degree Equations With 1 Variable

 The Factoring Method1. $x^{2}-5 x+4=0$

$$
(x-1)(x-4)=0
$$

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 $a^{2}+b x+c$.)

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

1. $x^{2}-5 x+4=0$

$$
(x-1)(x-4)=0
$$

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 $a^{2}+b x+c$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } p q=0, \text { then } p=0 \text { or } q=0
$$

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

1. $x^{2}-5 x+4=0$

$$
(x-1)(x-4)=0
$$

$$
x-1=
$$

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 $a^{2}+b x+c$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } p q=0, \text { then } p=0 \text { or } q=0
$$

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

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

$$
\text { If } p q=0, \text { then } p=0 \text { or } q=0
$$

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

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

$$
\text { If } p q=0, \text { then } p=0 \text { or } q=0
$$

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{array}{r}
\text { 1. } x^{2}-5 x+4=0 \\
(x-1)(x-4)=0 \\
x-1=0 \text { or } x-4=
\end{array}
$$

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 $a^{2}+b x+c$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } p q=0, \text { then } p=0 \text { or } q=0
$$

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

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

$$
\text { If } p q=0, \text { then } p=0 \text { or } q=0
$$

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

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

$$
\text { If } p q=0, \text { then } p=0 \text { or } q=0
$$

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 2. } x^{2}+7 x-18=0
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 2. } x^{2}+7 x-18=0
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 2. } x^{2}+7 x-18=0
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 2. } \begin{aligned}
x^{2}+7 x-18 & =0 \\
(x \quad)(x \quad) & =0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 2. } \begin{aligned}
x^{2}+7 x-18 & =0 \\
(x+9)(x-2) & =0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 2. } \begin{aligned}
x^{2}+7 x-18 & =0 \\
(x+9)(x-2) & =0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 2. } x^{2}+7 x-18=0 \\
& (x+9)(x-2)=0 \\
& x+9=
\end{aligned}
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 2. } x^{2}+7 x-18=0 \\
& \quad(x+9)(x-2)=0 \\
& x+9=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 2. } x^{2}+7 x-18=0 \\
& (x+9)(x-2)=0 \\
& x+9=0 \text { or }
\end{aligned}
$$

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

$$
\text { If } \mathbf{p q}=0, \text { then } p=0 \text { or } q=0
$$

Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{array}{r}
\text { 2. } x^{2}+7 x-18=0 \\
(x+9)(x-2)=0 \\
x+9=0 \text { or } x-2=
\end{array}
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 2. } x^{2}+7 x-18=0 \\
(x+9)(x-2)=0 \\
x+9=0 \quad \text { or } x-2=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 2. } x^{2}+7 x-18=0 \\
(x+9)(x-2)=0 \\
x+9=0 \quad \text { or } x-2=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 2. } x^{2}+7 x-18=0 \\
& (x+9)(x-2)=0 \\
& x+9=0 \text { or } x-2=0 \\
& x=
\end{aligned}
$$

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

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 2. } x^{2}+7 x-18=0 \\
& (x+9)(x-2)=0 \\
& x+9=0 \text { or } x-2=0 \\
& x=-9
\end{aligned}
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 2. } x^{2}+7 x-18=0 \\
& (x+9)(x-2)=0 \\
& x+9=0 \text { or } x-2=0 \\
& x=-9 \text { or }
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 2. } x^{2}+7 x-18=0 \\
(x+9)(x-2)=0 \\
x+9=0 \text { or } x-2=0 \\
x=-9 \quad \text { or } x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 2. } x^{2}+7 x-18=0 \\
(x+9)(x-2)=0 \\
x+9=0 \text { or } x-2=0 \\
x=-9 \quad \text { or } x=2
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 2. } x^{2}+7 x-18=0 \\
(x+9)(x-2)=0 \\
x+9=0 \text { or } x-2=0 \\
x=-9 \quad \text { or } x=2
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

3. $7 x^{2}-30 x+8=0$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

3. $7 x^{2}-30 x+8=0$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

3. $7 x^{2}-30 x+8=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

3. $7 x^{2}-30 x+8=0$
$(7 x \quad)(x \quad)=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

3. $7 x^{2}-30 x+8=0$

$$
(7 x-2)(x-4)=0
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

3. $7 x^{2}-30 x+8=0$

$$
(7 x-2)(x-4)=0
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 3. } 7 x^{2}-30 x+8=0 \\
& (7 x-2)(x-4)=0 \\
& 7 x-2=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 3. } 7 x^{2}-30 x+8=0 \\
& (7 x-2)(x-4)=0 \\
& 7 x-2=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 3. } 7 x^{2}-30 x+8=0 \\
& (7 x-2)(x-4)=0 \\
& 7 x-2=0 \text { or }
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{array}{r}
\text { 3. } 7 x^{2}-30 x+8=0 \\
(7 x-2)(x-4)=0 \\
7 x-2=0 \text { or } x-4=
\end{array}
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 3. } 7 x^{2}-30 x+8=0 \\
(7 x-2)(x-4)=0 \\
7 x-2=0 \text { or } x-4=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 3. } 7 x^{2}-30 x+8=0 \\
(7 x-2)(x-4)=0 \\
7 x-2=0 \text { or } x-4=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 3. } 7 x^{2}-30 x+8=0 \\
& (7 x-2)(x-4)=0 \\
& 7 x-2=0 \quad \text { or } x-4=0 \\
& 7 x=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 3. } 7 x^{2}-30 x+8=0 \\
& (7 x-2)(x-4)=0 \\
& 7 x-2=0 \quad \text { or } x-4=0 \\
& 7 x=2
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 3. } 7 x^{2}-30 x+8=0 \\
& (7 x-2)(x-4)=0 \\
& 7 x-2=0 \text { or } x-4=0 \\
& 7 x=2 \\
& x=
\end{aligned}
$$

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

$$
\text { If } \mathbf{p q}=0, \text { then } p=0 \text { or } q=0
$$

Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 3. } 7 x^{2}-30 x+8=0 \\
& (7 x-2)(x-4)=0 \\
& 7 x-2=0 \text { or } x-4=0 \\
& 7 x=2 \\
& x=2 / 7
\end{aligned}
$$

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 $\mathbf{a x}^{2}+b x+c$.)
Step 3: Apply the 'zero property of multiplication.

$$
\text { If } \mathbf{p q}=0, \text { then } p=0 \text { or } q=0
$$

Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 3. } 7 x^{2}-30 x+8=0 \\
& (7 x-2)(x-4)=0 \\
& 7 x-2=0 \text { or } x-4=0 \\
& 7 x=2 \\
& x=2 / 7 \quad \text { or }
\end{aligned}
$$

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

$$
\text { If } \mathbf{p q}=0, \text { then } p=0 \text { or } q=0
$$

Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 3. } 7 x^{2}-30 x+8=0 \\
& (7 x-2)(x-4)=0 \\
& 7 x-2=0 \text { or } x-4=0 \\
& 7 x=2 \\
& x=2 / 7 \quad \text { or } x=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 3. } 7 x^{2}-30 x+8=0 \\
& (7 x-2)(x-4)=0 \\
& 7 x-2=0 \quad \text { or } x-4=0 \\
& 7 x=2 \\
& x=2 / 7 \quad \text { or } x=4
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 3. } 7 x^{2}-30 x+8=0 \\
& (7 x-2)(x-4)=0 \\
& 7 x-2=0 \quad \text { or } x-4=0 \\
& 7 x=2 \\
& x=2 / 7 \quad \text { or } x=4
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

4. $5 x^{2}+7 x-6=0$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 4. } 5 x^{2}+7 x-6=0
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

4. $5 x^{2}+7 x-6=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

4. $5 x^{2}+7 x-6=0$
$(5 x \quad)(x \quad)=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 4. } \begin{array}{r}
5 x^{2}+7 x-6=0 \\
(5 x-3)(x+2)=0
\end{array}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 4. } \begin{array}{r}
5 x^{2}+7 x-6=0 \\
(5 x-3)(x+2)=0
\end{array}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } 5 x^{2}+7 x-6=0 \\
& (5 x-3)(x+2)=0 \\
& 5 x-3=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } 5 x^{2}+7 x-6=0 \\
&(5 x-3)(x+2)=0 \\
& 5 x-3=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{array}{r}
\text { 4. } 5 x^{2}+7 x-6=0 \\
(5 x-3)(x+2)=0 \\
5 x-3=0 \text { or }
\end{array}
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{array}{r}
\text { 4. } 5 x^{2}+7 x-6=0 \\
(5 x-3)(x+2)=0 \\
5 x-3=0 \text { or } x+2=
\end{array}
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
\text { 4. } 5 x^{2}+7 x-6 & =0 \\
(5 x-3)(x+2) & =0 \\
5 x-3=0 \text { or } x+2 & =0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } 5 x^{2}+7 x-6=0 \\
& (5 x-3)(x+2)=0 \\
& 5 x-3=0 \text { or } x+2=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 4. } 5 x^{2}+7 x-6=0 \\
(5 x-3)(x+2)=0 \\
5 x-3=0 \text { or } x+2=0 \\
5 x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } 5 x^{2}+7 x-6=0 \\
& (5 x-3)(x+2)=0 \\
& 5 x-3=0 \text { or } x+2=0 \\
& 5 x=3
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } 5 x^{2}+7 x-6=0 \\
& (5 x-3)(x+2)=0 \\
& 5 x-3=0 \text { or } x+2=0 \\
& 5 x=3 \\
& x=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } 5 x^{2}+7 x-6=0 \\
& (5 x-3)(x+2)=0 \\
& 5 x-3=0 \text { or } x+2=0 \\
& 5 x=3 \\
& x=3 / 5
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } 5 x^{2}+7 x-6=0 \\
& (5 x-3)(x+2)=0 \\
& 5 x-3=0 \text { or } x+2=0 \\
& 5 x=3 \\
& x=3 / 5 \text { or }
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 4. } 5 x^{2}+7 x-6=0 \\
& (5 x-3)(x+2)=0 \\
& 5 x-3=0 \quad \text { or } x+2=0 \\
& 5 x=3 \\
& x=3 / 5 \quad \text { or } x=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{array}{r}
\text { 4. } 5 x^{2}+7 x-6=0 \\
(5 x-3)(x+2)=0 \\
5 x-3=0 \text { or } x+2=0 \\
5 x=3 \\
x=3 / 5 \text { or } x=-2
\end{array}
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{array}{r}
\text { 4. } 5 x^{2}+7 x-6=0 \\
(5 x-3)(x+2)=0 \\
5 x-3=0 \text { or } x+2=0 \\
5 x=3 \\
x=3 / 5 \text { or } x=-2
\end{array}
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

5. $5 x^{2}+10 x=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

5. $5 x^{2}+10 x=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

5. $5 x^{2}+10 x=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

5. $5 x^{2}+10 x=0$

$$
5 x(
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

5. $5 x^{2}+10 x=0$

$$
5 x(x+2)=0
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

5. $5 x^{2}+10 x=0$

$$
5 x(x+2)=0
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 5. } \begin{array}{l}
5 x^{2}+10 x=0 \\
5 x(x+2)=0 \\
5 x=
\end{array}
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 5. } \begin{array}{l}
5 x^{2}+10 x=0 \\
5 x(x+2)=0 \\
5 x=0
\end{array} \\
& 5 x(x)
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } 5 x^{2}+10 x=0 \\
5 x(x+2)=0 \\
5 x=0 \quad \text { or } x+2=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } 5 x^{2}+10 x=0 \\
5 x(x+2)=0 \\
5 x=0 \text { or } x+2=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } 5 x^{2}+10 x=0 \\
5 x(x+2)=0 \\
5 x=0 \text { or } x+2=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

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

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } 5 x^{2}+10 x=0 \\
5 x(x+2)=0 \\
5 x=0 \text { or } x+2=0 \\
x=0
\end{gathered}
$$

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

$$
\text { If } \mathbf{p q}=0, \text { then } p=0 \text { or } q=0
$$

Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } 5 x^{2}+10 x=0 \\
5 x(x+2)=0 \\
5 x=0 \text { or } x+2=0 \\
x=0 \quad \text { or }
\end{gathered}
$$

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

$$
\text { If } \mathbf{p q}=0, \text { then } p=0 \text { or } q=0
$$

Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } 5 x^{2}+10 x=0 \\
5 x(x+2)=0 \\
5 x=0 \quad \text { or } x+2=0 \\
x=0 \quad \text { or } x=
\end{gathered}
$$

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

$$
\text { If } \mathbf{p q}=0, \text { then } p=0 \text { or } q=0
$$

Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } 5 x^{2}+10 x=0 \\
5 x(x+2)=0 \\
5 x=0 \quad \text { or } x+2=0 \\
x=0 \quad \text { or } x=-2
\end{gathered}
$$

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

$$
\text { If } \mathbf{p q}=0, \text { then } p=0 \text { or } q=0
$$

Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 5. } 5 x^{2}+10 x=0 \\
5 x(x+2)=0 \\
5 x=0 \quad \text { or } x+2=0 \\
x=0 \quad \text { or } x=-2
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

6. $12 x^{2}-8 x=0$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

6. $12 x^{2}-8 x=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

6. $12 x^{2}-8 x=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

6. $12 x^{2}-8 x=0$
$4 \times($

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 $a x^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

6. $12 x^{2}-8 x=0$
$4 x(3 x-2)=$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a x^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

6. $12 x^{2}-8 x=0$
$4 x(3 x-2)=0$

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 $a x^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

6. $12 x^{2}-8 x=0$
$4 x(3 x-2)=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } \quad 12 x^{2}-8 x=0 \\
& 4 x(3 x-2)=0 \\
& 4 x=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } 12 x^{2}-8 x=0 \\
& 4 x(3 x-2)=0 \\
& 4 x=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } 12 x^{2}-8 x=0 \\
& 4 x(3 x-2)=0 \\
& 4 x=0 \quad \text { or }
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } 12 x^{2}-8 x=0 \\
& 4 x(3 x-2)=0 \\
& 4 x=0 \text { or } 3 x-2=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a x^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } 12 x^{2}-8 x=0 \\
& 4 x(3 x-2)=0 \\
& 4 x=0 \text { or } 3 x-2=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } 12 x^{2}-8 x=0 \\
& 4 x(3 x-2)=0 \\
& 4 x=0 \text { or } 3 x-2=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } 12 x^{2}-8 x=0 \\
& 4 x(3 x-2)=0 \\
& 4 x=0 \text { or } 3 x-2=0 \\
& x=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } 12 x^{2}-8 x=0 \\
& 4 x(3 x-2)=0 \\
& 4 x=0 \text { or } 3 x-2=0 \\
& x=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } 12 x^{2}-8 x=0 \\
& 4 x(3 x-2)=0 \\
& 4 x=0 \text { or } 3 x-2=0 \\
& x=0 \quad \text { or }
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } \begin{array}{c}
12 x^{2}-8 x=0 \\
4 x(3 x-2)=0 \\
4 x=0
\end{array} \text { or } 3 x-2=0 \\
& 3 x= \\
& x=0 \text { or }
\end{aligned}
$$

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

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } 12 x^{2}-8 x=0 \\
& 4 x(3 x-2)=0 \\
& 4 x=0 \text { or } 3 x-2=0 \\
& x=0 \quad \text { or } \\
& x x=2
\end{aligned}
$$

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

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } 12 x^{2}-8 x=0 \\
& 4 x(3 x-2)=0 \\
& 4 x=0 \quad \text { or } 3 x-2=0 \\
& 3 x=2 \\
& x=0 \quad \text { or } x=
\end{aligned}
$$

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

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } \begin{array}{c}
12 x^{2}-8 x=0 \\
4 x(3 x-2)=0 \\
4 x=0
\end{array} \text { or } 3 x-2=0 \\
& 3 x=2 \\
& x=0 \quad \text { or } x=2 / 3
\end{aligned}
$$

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

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 6. } \begin{array}{c}
12 x^{2}-8 x=0 \\
4 x(3 x-2)=0 \\
4 x=0
\end{array} \text { or } 3 x-2=0 \\
& 3 x=2 \\
& x=0 \quad \text { or } x=2 / 3
\end{aligned}
$$

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

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 7. } x^{2}-4=0
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 7. } x^{2}-4=0
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 7. } x^{2}-4=0
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 7. } x^{2}-4=0 \\
& (x \quad)(x \quad)=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } x^{2}-4=0 \\
(x+2)(x-2)=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } x^{2}-4=0 \\
(x+2)(x-2)=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 7. } x^{2}-4=0 \\
& (x+2)(x-2)=0 \\
& x+2=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 7. } x^{2}-4=0 \\
& (x+2)(x-2)=0 \\
& x+2=0
\end{aligned}
$$

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

$$
\text { If } \mathbf{p q}=0, \text { then } p=0 \text { or } q=0
$$

Step 4: Solve each equation.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } x^{2}-4=0 \\
(x+2)(x-2)=0 \\
x+2=0 \text { or }
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } x^{2}-4=0 \\
(x+2)(x-2)=0 \\
x+2=0 \text { or } x-2=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } x^{2}-4=0 \\
(x+2)(x-2)=0 \\
x+2=0 \text { or } x-2=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } x^{2}-4=0 \\
(x+2)(x-2)=0 \\
x+2=0 \text { or } x-2=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } x^{2}-4=0 \\
(x+2)(x-2)=0 \\
x+2=0 \text { or } x-2=0 \\
x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } x^{2}-4=0 \\
(x+2)(x-2)=0 \\
x+2=0 \text { or } x-2=0 \\
x=-2
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } x^{2}-4=0 \\
(x+2)(x-2)=0 \\
x+2=0 \text { or } x-2=0 \\
x=-2 \text { or }
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } x^{2}-4=0 \\
(x+2)(x-2)=0 \\
x+2=0 \quad \text { or } x-2=0 \\
x=-2 \quad \text { or } x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } x^{2}-4=0 \\
(x+2)(x-2)=0 \\
x+2=0 \quad \text { or } x-2=0 \\
x=-2 \quad \text { or } x=2
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 7. } x^{2}-4=0 \\
(x+2)(x-2)=0 \\
x+2=0 \quad \text { or } x-2=0 \\
x=-2 \quad \text { or } x=2
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

8. $100 x^{2}-49=0$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

8. $100 x^{2}-49=0$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

8. $100 x^{2}-49=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\left.\begin{array}{c}
\text { 8. } 100 x^{2}-49=0 \\
(10 x
\end{array}\right)(10 x \quad)=0.8 .
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 8. } 100 x^{2}-49=0 \\
(10 x+7)(10 x-7)=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 8. } 100 x^{2}-49=0 \\
(10 x+7)(10 x-7)=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## 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'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 8. } 100 x^{2}-49=0 \\
(10 x+7)(10 x-7)=0 \\
10 x+7=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 8. } 100 x^{2}-49=0 \\
(10 x+7)(10 x-7)=0 \\
10 x+7=0 \text { or }
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 8. } 100 x^{2}-49=0 \\
(10 x+7)(10 x-7)=0 \\
10 x+7=0 \text { or } 10 x-7=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 8. } 100 x^{2}-49=0 \\
(10 x+7)(10 x-7)=0 \\
10 x+7=0 \quad \text { or } 10 x-7=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 8. } 100 x^{2}-49=0 \\
(10 x+7)(10 x-7)=0 \\
10 x+7=0 \quad \text { or } 10 x-7=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 8. } 100 x^{2}-49=0 \\
& (10 x+7)(10 x-7)=0 \\
& 10 x+7=0 \quad \text { or } 10 x-7=0 \\
& 10 x=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 8. } 100 x^{2}-49=0 \\
& (10 x+7)(10 x-7)=0 \\
& 10 x+7=0 \quad \text { or } 10 x-7=0 \\
& 10 x=-7
\end{aligned}
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 8. } 100 x^{2}-49=0 \\
& (10 x+7)(10 x-7)=0 \\
& 10 x+7=0 \text { or } 10 x-7=0 \\
& 10 x=-7 \\
& x=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 8. } 100 x^{2}-49=0 \\
(10 x+7)(10 x-7)=0 \\
10 x+7=0 \text { or } 10 x-7=0 \\
10 x=-7 \\
x=-7 / 10
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\left.\begin{array}{c}
\text { 8. } 100 x^{2}-49=0 \\
(10 x+7)(10 x-7)=0 \\
10 x+7=0
\end{array} \text { or } 10 x-7=0\right\}
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 8. } 100 x^{2}-49=0 \\
& (10 x+7)(10 x-7)=0 \\
& 10 x+7=0 \text { or } 10 x-7=0 \\
& 10 x=-7 \quad 10 x=7 \\
& x=-7 / 10
\end{aligned}
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 8. } 100 x^{2}-49=0 \\
(10 x+7)(10 x-7)=0 \\
10 x+7=0
\end{gathered} \text { or } 10 x-7=0 .
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 8. } 100 x^{2}-49=0 \\
(10 x+7)(10 x-7)=0 \\
10 x+7=0
\end{gathered} \text { or } 10 x-7=0 .
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{gathered}
\text { 8. } 100 x^{2}-49=0 \\
(10 x+7)(10 x-7)=0 \\
10 x+7=0
\end{gathered} \text { or } 10 x-7=0 .
$$

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 $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

9. $x^{2}-12 x+36=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

9. $x^{2}-12 x+36=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

9. $x^{2}-12 x+36=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

9. $x^{2}-12 x+36=0$

$$
(\mathbf{x} \quad)(\mathrm{x} \quad)=\mathbf{0}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

9. $x^{2}-12 x+36=0$

$$
(x-6)(x-6)=0
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

9. $x^{2}-12 x+36=0$

$$
(x-6)(x-6)=0
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 9. } x^{2}-12 x+36=0 \\
& (x-6)(x-6)=0 \\
& x-6=
\end{aligned}
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 9. } x^{2}-12 x+36=0 \\
& (x-6)(x-6)=0 \\
& x-6=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 9. } x^{2}-12 x+36=0 \\
& (x-6)(x-6)=0 \\
& x-6=0 \text { or }
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 9. } x^{2}-12 x+36=0 \\
& (x-6)(x-6)=0 \\
& x-6=0 \text { or } x-6=
\end{aligned}
$$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 9. } x^{2}-12 x+36=0 \\
& \qquad(x-6)(x-6)=0 \\
& x-6=0 \text { or } x-6=0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 9. } x^{2}-12 x+36=0 \\
& \qquad(x-6)(x-6)=0 \\
& x-6=0 \text { or } x-6=0
\end{aligned}
$$

Don't write the same equation twice.

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 $\left.a^{2}+b x+c.\right)$
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

9. $x^{2}-12 x+36=0$

$$
\begin{gathered}
(x-6)(x-6)=0 \\
x-6=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

9. $x^{2}-12 x+36=0$

$$
\begin{gathered}
(x-6)(x-6)=0 \\
x-6=0
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 9. } \begin{gathered}
x^{2}-12 x+36=0 \\
(x-6)(x-6)=0 \\
x-6=0 \\
x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 9. } x^{2}-12 x+36=0 \\
& \begin{array}{c}
(x-6)(x-6)=0 \\
x-6=0 \\
x=6
\end{array}
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 9. } \begin{gathered}
x^{2}-12 x+36=0 \\
(x-6)(x-6)=0 \\
x-6=0 \\
x=6
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 10. } 25 x^{2}+30 x+9=0
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 10. } 25 x^{2}+30 x+9=0
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 10. } 25 x^{2}+30 x+9=0
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

10. $25 x^{2}+30 x+9=0$
$(5 x \quad)(5 x \quad)=0$

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 $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 10. } \begin{aligned}
25 x^{2}+30 x+9 & =0 \\
(5 x+3)(5 x+3) & =0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 10. } \begin{aligned}
25 x^{2}+30 x+9 & =0 \\
(5 x+3)(5 x+3) & =0
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{aligned}
& \text { 10. } 25 x^{2}+30 x+9=0 \\
& (5 x+3)(5 x+3)=0 \\
& 5 x+3=
\end{aligned}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{array}{r}
\text { 10. } 25 x^{2}+30 x+9=0 \\
(5 x+3)(5 x+3)=0 \\
5 x+3=0
\end{array}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\begin{array}{r}
\text { 10. } 25 x^{2}+30 x+9=0 \\
(5 x+3)(5 x+3)=0 \\
5 x+3=0
\end{array}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$ Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 10. } \begin{gathered}
25 x^{2}+30 x+9=0 \\
(5 x+3)(5 x+3)=0 \\
5 x+3=0 \\
5 x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 10. } \begin{gathered}
25 x^{2}+30 x+9=0 \\
(5 x+3)(5 x+3)=0 \\
5 x+3=0 \\
5 x=-3
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 10. } \begin{gathered}
25 x^{2}+30 x+9=0 \\
(5 x+3)(5 x+3)=0 \\
5 x+3=0 \\
5 x=-3 \\
x=
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $a^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 10. } \begin{gathered}
25 x^{2}+30 x+9=0 \\
(5 x+3)(5 x+3)=0 \\
5 x+3=0 \\
5 x=-3 \\
x=-3 / 5
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 10. } \begin{gathered}
25 x^{2}+30 x+9=0 \\
(5 x+3)(5 x+3)=0 \\
5 x+3=0 \\
5 x=-3 \\
x=-3 / 5
\end{gathered}
$$

Step 1: Write the equation in standard form: $a x^{2}+b x+c=0$
Step 2: Write the equation in 'factored form'.
(Factor the polynomial $\mathbf{a x}^{2}+b x+c$.)
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.

## Solving Second Degree Equations With 1 Variable

## The Factoring Method

$$
\text { 10. } \begin{gathered}
25 x^{2}+30 x+9=0 \\
(5 x+3)(5 x+3)=0 \\
5 x+3=0 \\
5 x=-3
\end{gathered}
$$

## Good luck on your homework !!

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 $\mathbf{a x}^{2}+b x+c$.)
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.

