Quadratic Formula Guided Practice

Using three different colored highlights, highlight the coefficients a, b & c in the formula and the equation using the same color.

$$y = ax^2 + bx + c \qquad x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Example

$$y = x^2 - 12x - 28$$

Step 1)

Identify and highlight the coefficients a, b & c.

$a =$

$b =$

$c =$

Step 2)

Write the skeleton.

Step 3)

Substitute the values of a, b & c in the appropriate blanks. Use the highlighted coloring to help.

Step 4)

Simplify.

Step 5)

Split into two equations and simplify.

Date _____ Name _____

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Directions:

Highlight the coefficients a, b & c in the formula above using three different colored highlighters. For each problem, highlight the coefficients of a, b & c in the ☐ using the same color. Use the colored formula as a guide for substituting the coefficients. Find the solutions to the quadratic function, and plot them on the x-axis. Then sketch the graph.

● $x^2 + 25 = 10x$

a = ☐ b = ☐ c = ☐

Skeleton

$x =$

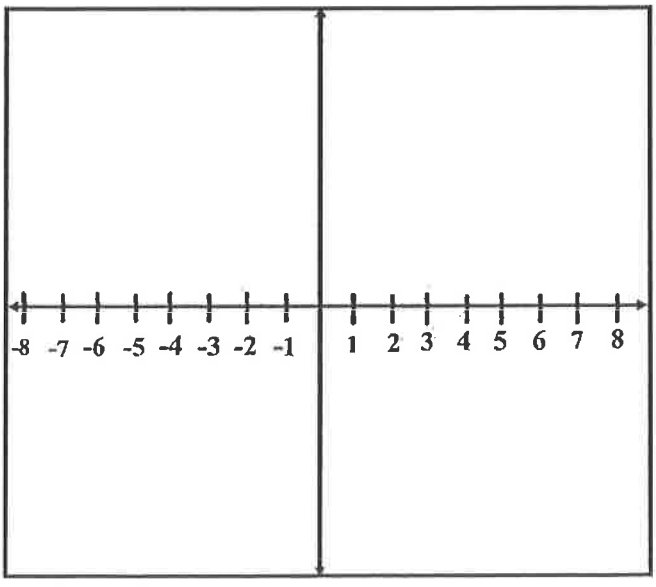
Simplify

$x = \frac{\pm\sqrt{\quad}}{\quad}$

$x = \frac{\pm}{\quad}$

$x_1 = \frac{+}{\quad} = ☐$

$x_2 = \frac{-}{\quad} = ☐$



● $x^2 - 8x = -15$

a = ☐ b = ☐ c = ☐

Skeleton

$x =$

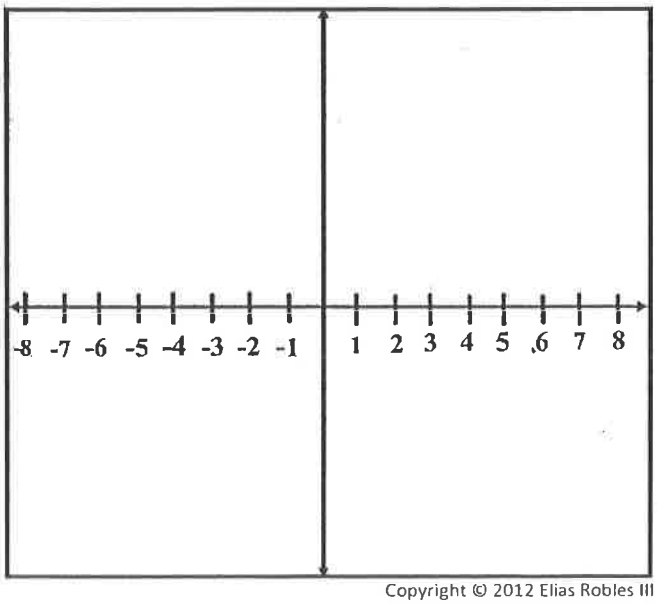
Simplify

$x = \frac{\pm\sqrt{\quad}}{\quad}$

$x = \frac{\pm}{\quad}$

$x_1 = \frac{+}{\quad} = ☐$

$x_2 = \frac{-}{\quad} = ☐$



Date_____ Name _____

1. $y = x^2 - 6x^2 + 8$

a =
b =
c =

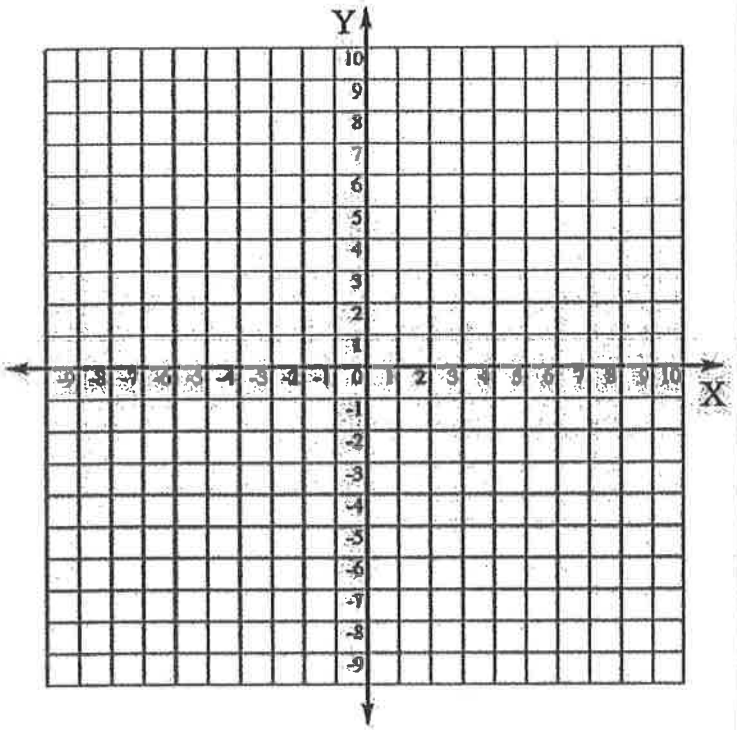
$$x = \frac{-(\ ) \pm \sqrt{(\ )^2 - 4(\ )(\ )}}{2(\ )}$$

$$x = \frac{\pm\sqrt{\ }}{\ }$$

$$x = \frac{\pm}{\ }$$

$x_1 = \frac{\ }{\ } = \bigcirc$

$x_2 = \frac{\ }{\ } = \bigcirc$



2. $y = x^2 - 4$

a =
b =
c =

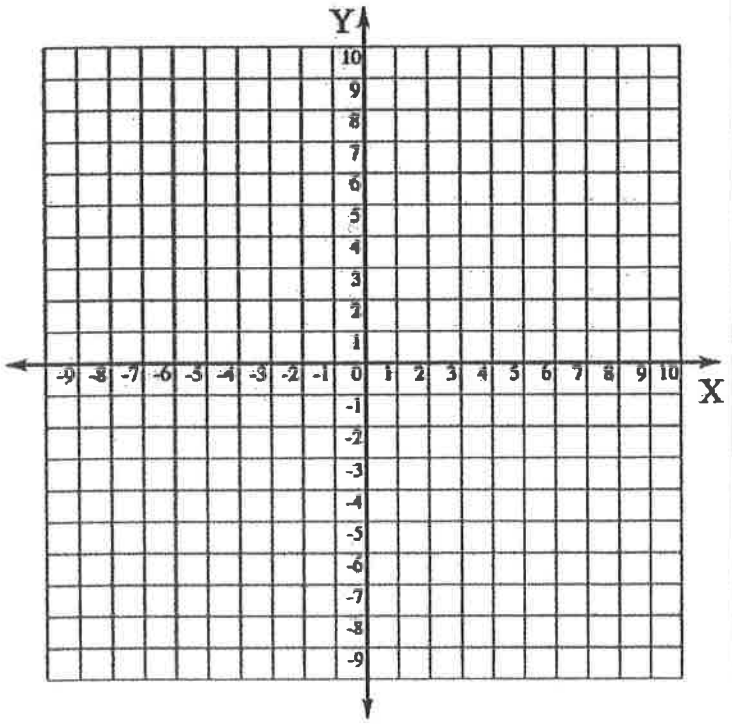
$$x = \frac{-(\ ) \pm \sqrt{(\ )^2 - 4(\ )(\ )}}{2(\ )}$$

$$x = \frac{\pm\sqrt{\ }}{\ }$$

$$x = \frac{\pm}{\ }$$

$x_1 = \frac{\ }{\ } = \bigcirc$

$x_2 = \frac{\ }{\ } = \bigcirc$



Date _____

$x^2+5x+6=0$

a = ☐ b = ☐ c = ☐

Skeleton

x =

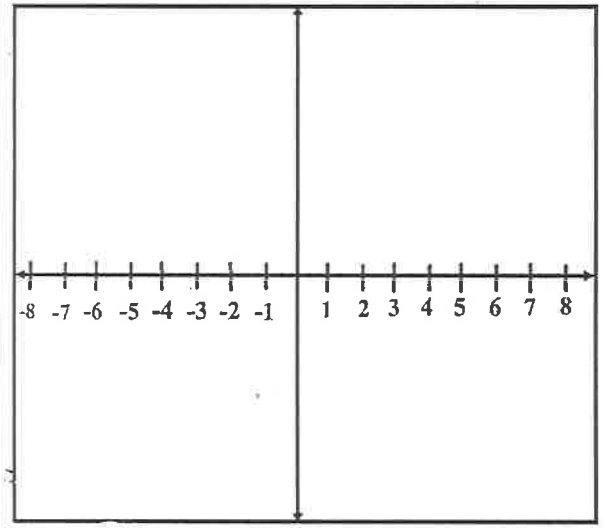
Simplify

$x = \frac{\pm\sqrt{\quad}}{\quad}$

$x = \frac{\pm}{\quad}$

$x_1 = \frac{+}{\quad} = \square$

$x_2 = \frac{-}{\quad} = \square$



$x^2-3=2x$

a = ☐ b = ☐ c = ☐

Skeleton

x =

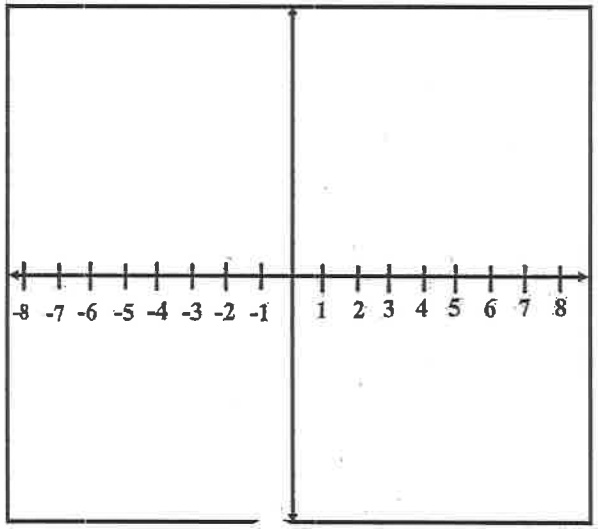
Simplify

$x = \frac{\pm\sqrt{\quad}}{\quad}$

$x = \frac{\pm}{\quad}$

$x_1 = \frac{+}{\quad} = \square$

$x_2 = \frac{-}{\quad} = \square$



Name _____

$x^2-5x=0$

a = ☐ b = ☐ c = ☐

Skeleton

x =

Simplify

$x = \frac{\pm\sqrt{\quad}}{\quad}$

$x = \frac{\pm}{\quad}$

$x_1 = \frac{+}{\quad} = \square$

$x_2 = \frac{-}{\quad} = \square$