

# Graphing Quadratics

Name \_\_\_\_\_

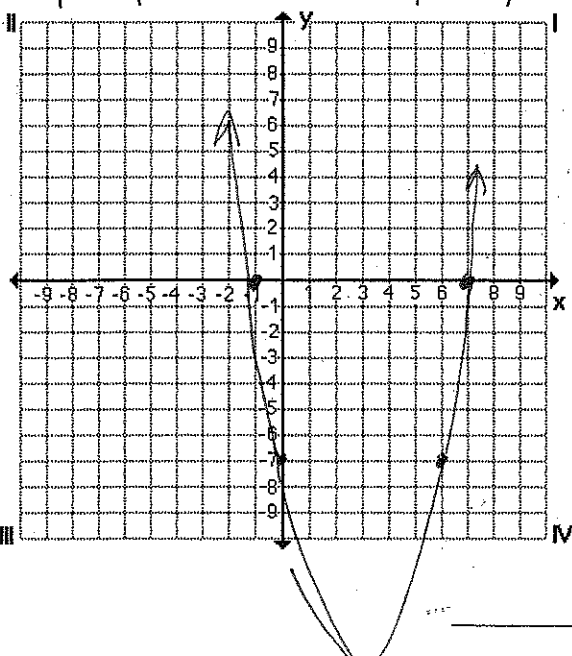
Kagan Roundtable

$$y = x^2 - 6x - 7$$

$$(x - 7)(x + 1)$$

x-intercepts

(7, 0) and (-1, 0)

Task 1B	Task 2B
<p>What is the axis of symmetry?</p> $\frac{7 + -1}{2} = \frac{6}{2} = 3$ <p><u>X = 3</u></p>	<p>What is the vertex?</p> $y = x^2 - 6x - 7$ $y = 3^2 - 6(3) - 7$ $y = 9 - 18 - 7$ $y = -9 - 7$ $y = -16$ <p><u>(3, -16)</u></p>
<p>What is the y-intercept?</p> $x = 0$ $y = 0^2 - 6(0) - 7$ $y = -7$ <p><u>(0, -7)</u></p>	<p>Task 4B</p> <p>Graph. (include at least 3 points)</p> 

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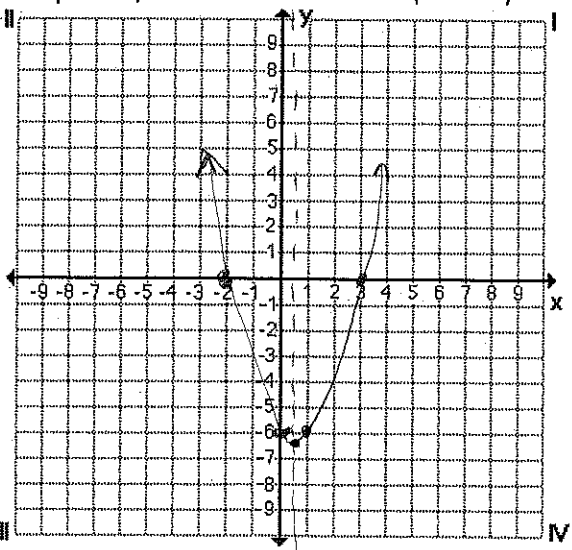
Kagan Roundtable

Name \_\_\_\_\_

$$y = (x + 2)(x - 3)$$

x-intercepts

$$(-2, 0) (3, 0)$$

Task 1A	Task 2A
<p>What is the axis of symmetry?</p> $\frac{-2 + 3}{2} = \frac{1}{2}$ $x = \frac{1}{2}$	<p>What is the vertex?</p> $y = \left(\frac{1}{2} + 2\right)\left(\frac{1}{2} - 3\right)$ $y = (2.5)(-2.5)$ $y = -6.25$ $\left(\frac{1}{2}, -6.25\right)$
Task 3A	Task 4A
<p>What is the y-intercept?</p> $x = 0$ $(0 + 2)(0 - 3)$ $(2)(-3)$ $-6$ $(0, -6)$	<p>Graph. (include at least 3 points)</p> 

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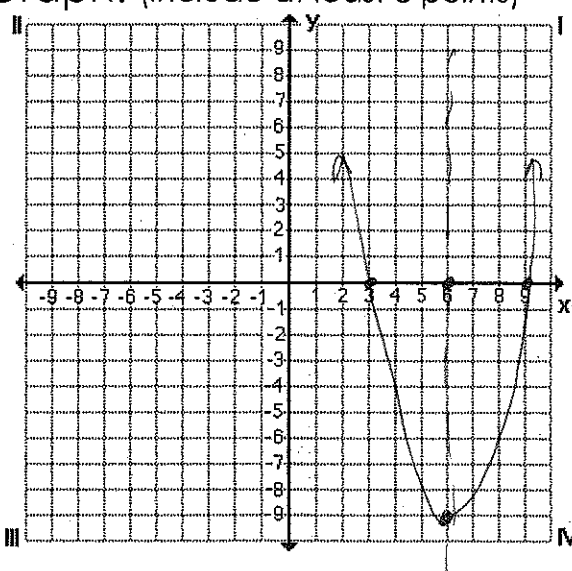
Kagan Roundtable

Name \_\_\_\_\_

$$y = (x - 3)(x - 9)$$

x-intercepts

$$(3, 0) (9, 0)$$

Task 1C	Task 2C
<p>What is the axis of symmetry?</p> $\frac{3+9}{2} = \frac{12}{2} = 6$ $x = 6$	<p>What is the vertex?</p> $y = (6-3)(6-9)$ $y = (3)(-3)$ $y = -9$ $(6, -9)$
Task 3C	Task 4C
<p>What is the y-intercept?</p> $x = 0$ $y = (0-3)(0-9)$ $y = (-3)(-9)$ $y = 27$	<p>Graph. (include at least 3 points)</p> 

# Graphing Quadratics

Kagan Roundtable

Name \_\_\_\_\_

$$y = -x^2 + 4x$$

$$y = -x(x - 4) \text{ or } y = x(-x + 4)$$

X-intercepts

0 and 4

## Task 1D

What is the axis of symmetry?

$$\frac{0 + 4}{2} = 2$$

$$x = 2$$

## Task 2D

What is the vertex?

$$y = -(2)^2 + 4(2)$$

$$y = -4 + 8$$

$$y = 4$$

$$(2, 4)$$

## Task 3D

What is the y-intercept?

0

## Task 4D

Graph. (include at least 3 points)

