

Graphing Quadratics HW

Name _____

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

Vertex Form:

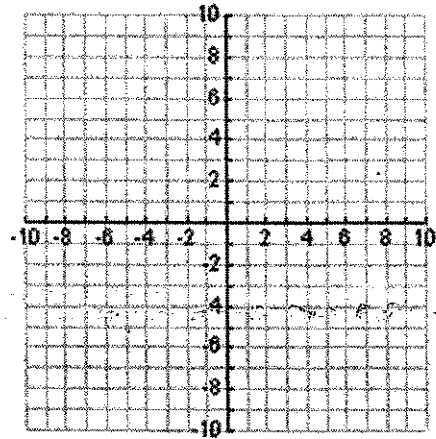
Vertex:

x-int(s):

y-int:

Axis of Symmetry:

Now graph (use 1-3-5 rule)



2. $y = 3x^2 + 12x + 2$

Vertex Form:

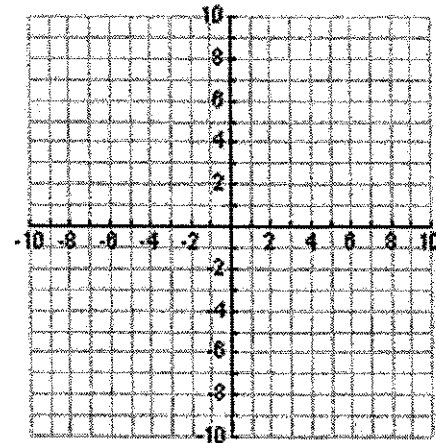
Vertex:

x-int(s) (HINT: Round your solutions!)

y-int:

Axis of Symmetry:

Now graph (Use 1-3-5 rule)



3. $y = x^2 + 2x$

Vertex Form:

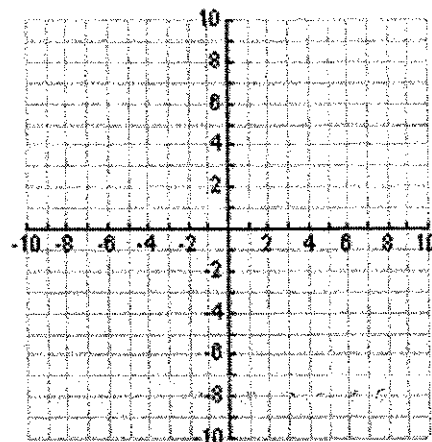
Vertex:

x-int(s):

y-int:

Axis of Symmetry:

Now graph (use 1-3-5 rule)



Graphing Quadratics HW

Name solns

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

Vertex Form: $y = x^2 - 2x + \underline{1} - 8 - \underline{1}$

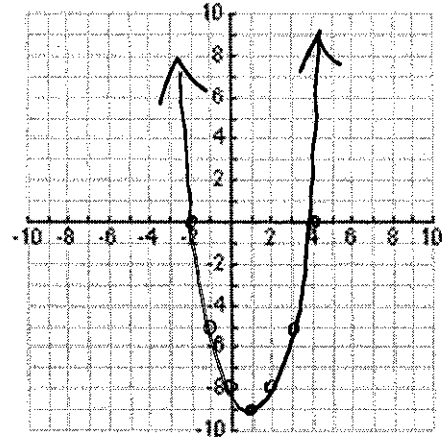
Vertex: $(1, -9)$

x-int(s): $0 = (x-4)(x+2)$
 $x = 4, -2$

y-int: -8

Axis of Symmetry: $x = 1$

$\frac{-2}{2 \cdot 1} = 1 \checkmark$
 $1^2 - 2 - 8 = -9 \checkmark$



Now graph (use 1-3-5 rule)

1. $y = 3x^2 + 12x + 2$

Vertex Form: $y = 3(x+2)^2 - 10$

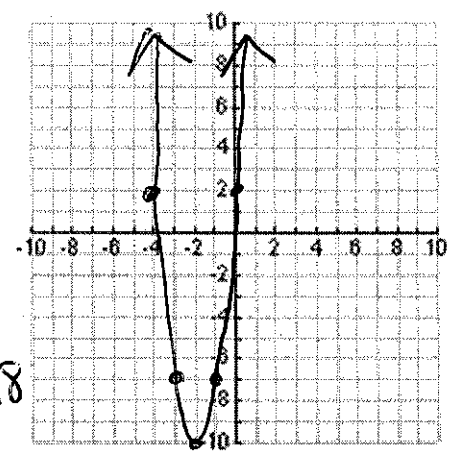
Vertex: $(-2, -10)$

x-int(s) (HINT: Round your solutions!)
 $3(x+2)^2 - 10 = 10 \quad (x+2)^2 = \frac{20}{3}$
 $3(x+2)^2 = 20 \quad x = \pm \sqrt{\frac{20}{3}} - 2$

y-int: 2

Axis of Symmetry: $x = -2$ $x \approx -1.7, -3.8$

Now graph (Use 1-3-5 rule)



$x \approx 3.9$
 $y \approx 15$

$y = 3(x^2 + 4x + \underline{4}) + 2 - \underline{12}$ $(\frac{4}{2})^2$

$y = 3(x+2)^2 - 10$

3. $y = x^2 + 2x$

Vertex Form:

$$y = x^2 + 2x + 1 - 1$$

$$y = (x+1)^2 - 1$$

Vertex:

$$(-1, -1)$$

x-int(s):

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

$$x = 0, -2$$

y-int:

$$0$$

Axis of Symmetry:

$$x = -1$$

Now graph (use 1-3-5 rule)

