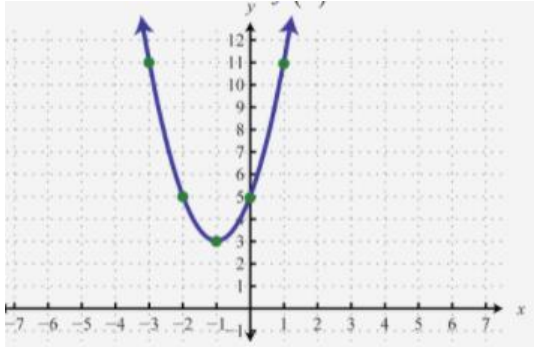


Extra Practice: Quadratic Functions in Vertex Form

1. Analyze each graph below to identify each of the following:
a)



Coordinates of the vertex: _____

Equation of the axis of symmetry: _____

Direction of opening: _____

y-intercept: _____

x-intercepts(if any) _____

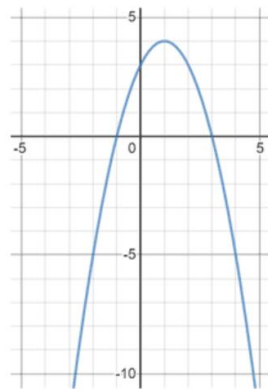
Does this function have a max or does it have a min? _____

What is the value of the max/min? _____

Domain: _____

Range: _____

b)



Coordinates of the vertex: _____

Equation of the axis of symmetry: _____

Direction of opening: _____

y-intercept: _____

x-intercepts (if any) _____

Does this function have a max or does it have a min? _____

What is the value of the max/min? _____

Domain: _____

Range: _____

Extra Practice: Quadratic Functions in Vertex Form

2. Analyze each equation below, identifying each of the following:

a) $f(x) = -\frac{1}{4}(x + 8)^2 - 10$

$a =$ _____ $h =$ _____ $k =$ _____

Coordinates of the vertex: _____

Equation of the axis of symmetry: _____

Direction of opening: _____

y-intercept: _____

Show calc:

Describe the width: _____

Does this function have a max or does it have a min? _____

What is the value of the max/min? _____

Domain: _____

Range: _____

b) $f(x) = 3(x - 5)^2 - 55$

$a =$ _____ $h =$ _____ $k =$ _____

Coordinates of the vertex: _____

Equation of the axis of symmetry: _____

Direction of opening: _____

y-intercept: _____

Show calc:

Description of the width: _____

Does this function have a max or does it have a min? _____

What is the value of the max/min? _____

Domain: _____

Range: _____

Extra Practice: Quadratic Functions in Vertex Form

3. Calculate the x-intercepts (if any) for the following quadratic functions:

a) $f(x) = (x - 7)^2 - 9$

b) $f(x) = -5(x + 2)^2$

c) $f(x) = -(x - 12)^2 + 225$

d) $f(x) = -2(x + 6)^2 - 7$

e) $f(x) = 1.5(x + 3)^2 - 9$

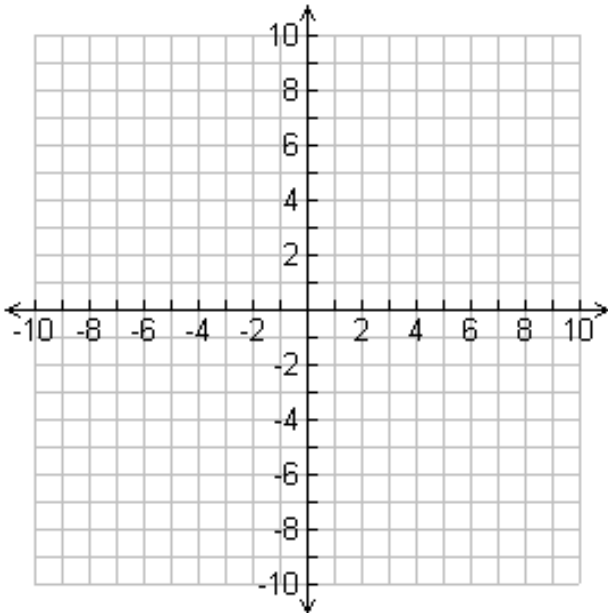
Extra Practice: Quadratic Functions in Vertex Form

4. Sketch the graph of each function below using a minimum of 5 points.
Your graphs must include the y-intercept:

a) $f(x) = -(x - 3)^2 + 5$

Label the vertex with its coordinates

Sketch the axis of symmetry with your function and label it with its equation.



b) $f(x) = 2(x + 1)^2 - 6$

Label the vertex with its coordinates

Sketch the axis of symmetry with your function and label it with its equation.

