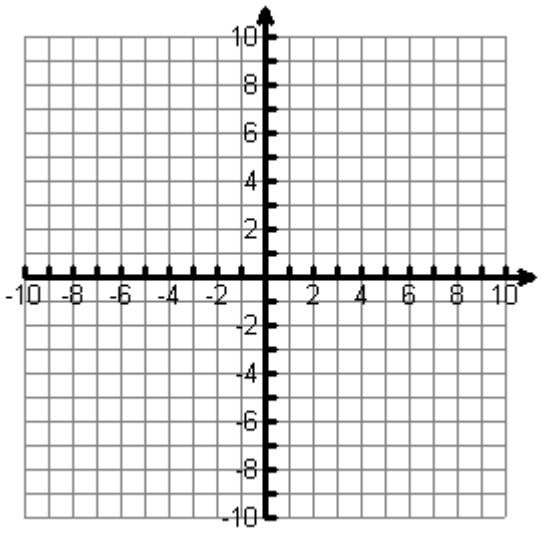
Characteristics of Quadratic Functions (pp. 2 of 5)

Sample Problems

Find the characteristic parts of each function. Use this information to produce the graph.

A) $y = -x^2 + 6x - 2$

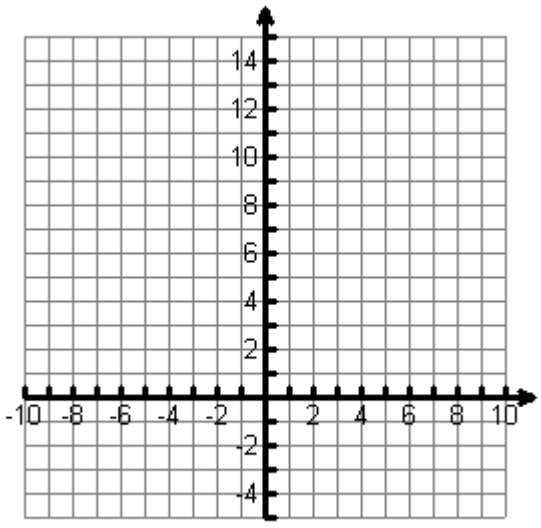
Characteristic	Value
Vertex	
Axis of Symmetry	
y-intercept	
Point symmetric to *y*-intercept	
x-intercept(s)	



x	*y*

B) $f(x) = 2(x+1)^2 + 3$

Characteristic	Value
Vertex	
Axis of Symmetry	
y-intercept	
Point symmetric to *y*-intercept	
x-intercept(s)	



x	*y*

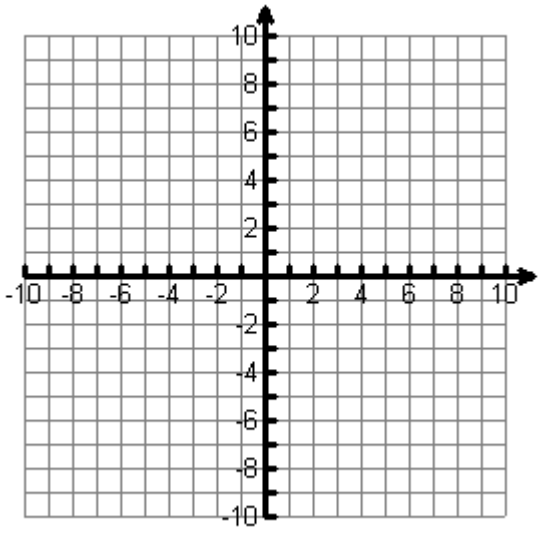
Characteristics of Quadratic Functions (pp. 3 of 5)

Practice Problems

For problems #1-4 make a table of values, graph the function, find the vertex, determine if the vertex is a maximum or minimum, write the equation of the line for the axis of symmetry, find the y-intercept and symmetric point, and give the x-intercepts.

1) $f(x) = x^2 + 4x - 5$

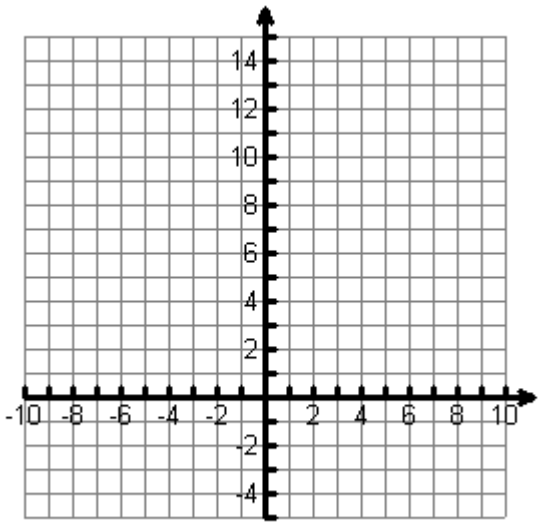
Characteristic	Value
Vertex	
Axis of Symmetry	
y-intercept	
Point symmetric to *y*-intercept	
x-intercept(s)	



x	*y*

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

Characteristic	Value
Vertex	
Axis of Symmetry	
y-intercept	
Point symmetric to *y*-intercept	
x-intercept(s)	

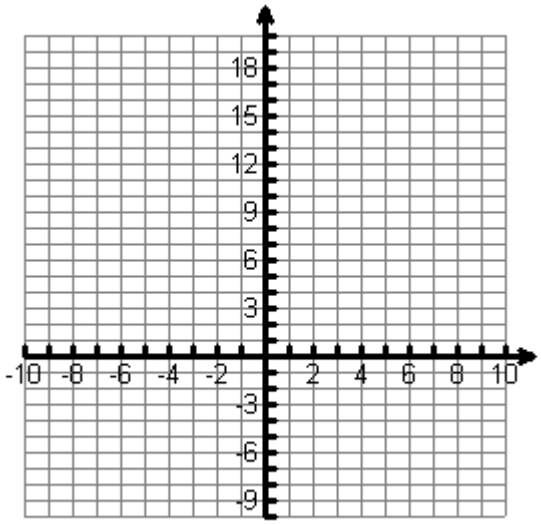


x	*y*

Characteristics of Quadratic Functions (pp. 4 of 5)

3) $y = -x^2 - 4x + 12$

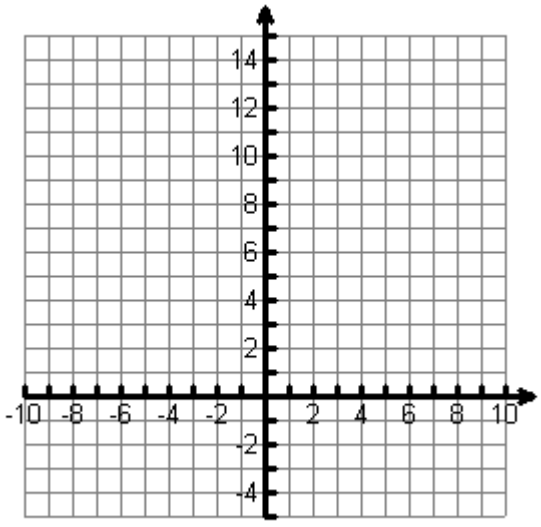
Characteristic	Value
Vertex	
Axis of Symmetry	
y-intercept	
Point symmetric to *y*-intercept	
x-intercept(s)	



x	*y*

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

Characteristic	Value
Vertex	
Axis of Symmetry	
y-intercept	
Point symmetric to *y*-intercept	
x-intercept(s)	



x	*y*