

Pg. 134 2.1 – Quadratic Functions and Models

Quadratic Function:

Axis of Symmetry:

Standard Form of a Quadratic Function:

Vertex: **OR**

Important: Axis of symmetry passes through the vertex.

If $a > 0$, then there is a _____. If $a < 0$, then there is a _____.



Ex 1:

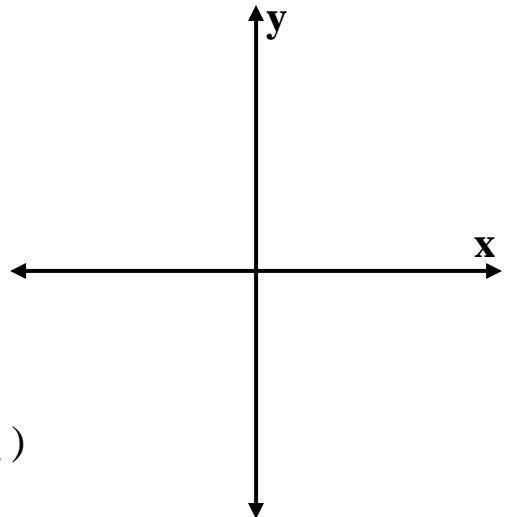
Sketch the graph of the quadratic function without using a graphing utility. Identify the vertex, axis of symmetry, and x-intercept(s).

$$h(x) = 9 - x^2$$

Axis of Symmetry: $x =$ _____

Vertex: (_____ , _____)

x-intercepts: (_____ , _____) , (_____ , _____)



Ex 2:

Use a graphing utility to graph the quadratic function. Identify the vertex, axis of symmetry, and x-intercepts. Then check your results algebraically by writing the quadratic function in standard form.

$$h(x) = -(x^2 + x - 30)$$

Vertex: _____

Axis of Symmetry: _____

x-intercepts:

Ex 3:

Write the standard form of the equation of the parabola that has the indicated vertex and whose graph passes through the given point.

Vertex: (2,3) **Point:** (0,2)

Assignment 2.1

Pg. 134 Vocab #'s 2, 4, 5

Problem Set #'s 1-69 ODD, 75-81 ODD

REQUIRED: Vocab, 5, 9, 17, 31, 39, 43, 47, 59, 65, 75, 77, 79, 81