1.  What is the the equation for a Quadratic Function in Standard Form?

2.  What do we call the graph of a Quadratic Function?

3.  What is the Vertex of a parabola?

4.  a)  What is the Axis of Symmetry (also called Line of Symmetry) of a parabola?

b)  What kind of line is the Axis of Symmetry?

c)  Where is the Axis of Symmetry located on every parabola?

5.  What must be true about the equation of a parabola for the graph to open up?

6.  What must be true about the equation of a parabola for the graph to open down?

7.  When is the vertex of a parabola called a Minimum?

8.  When is the vertex of a parabola called a Maximum?

9.  Use the following graph of a parabola.  State the coordinates of the vertex and the equation of the Axis of Symmetry:
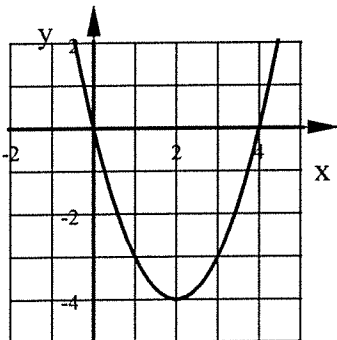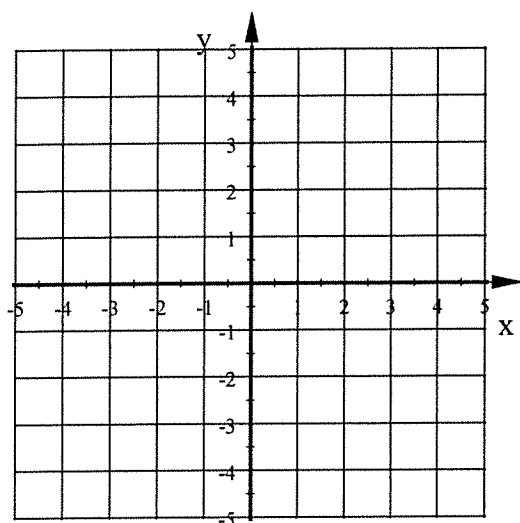


Coord of Vertex:                    Eq of Axis of Symm:

10. Read Example 2 on page 511.  Graph the quadratic function below with 5 points.

$y = -2x^2 + 5$



Read Example 3 on page 512.  Given the quadratic function: $y = ax^2 + bx + c$

11. Finish this sentence:  The closer the value of $a$ is to zero the _____ the parabola.

12. Finish this sentence:  The further the value of $a$ is from zero the _____ the parabola.

13. Place the following quadratics in order from widest to narrowest. _____
A. $y = -4x^2 + 6x - 9$
B. $y = x^2 - 8x + 17$
C. $y = 0.15x^2 + 3x - 1$
D. $y = -9x^2 - 10x + 5$
E. $y = -0.5x^2 + 4x + 30$

14. If the vertex of a parabola is the point $(-13, 8)$ write the equation of the Axis of Symmetry.

15. If the axis of symmetry of a parabola is $x = 6$ what do you know about the vertex?

2