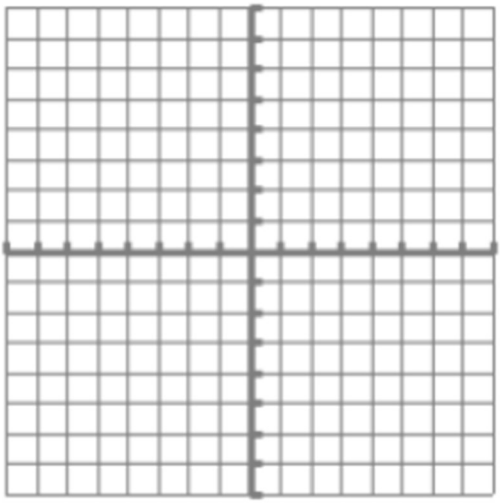
MPM2D 3.4B: Work Period after Lesson 3.4

1. Graph the following parabolas from vertex form. Show at least 5 exact points, clearly. Fill in the missing information.

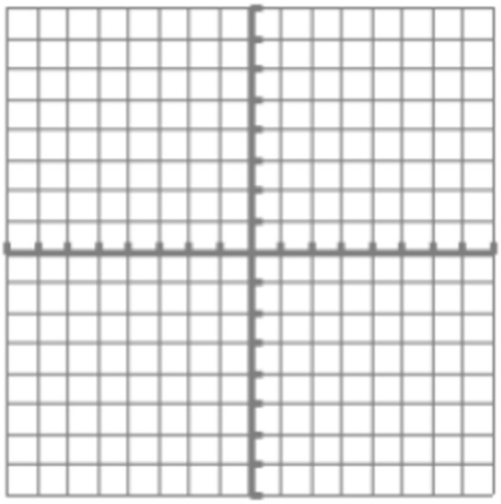
a) $y = (x + 3)^2 - 4$

Vertex: _____
AOS: _____
Is the vertex a max or min? _____
Is there a stretch or compression? _____



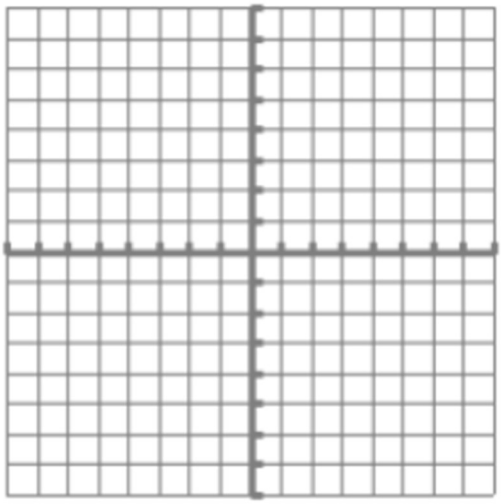
b) $y = -\frac{1}{2}x^2 + 1$

Vertex: _____
AOS: _____
Is the vertex a max or min? _____
Is there a stretch or compression? _____



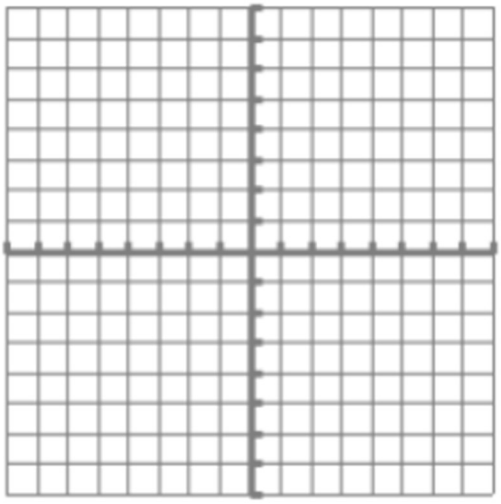
c) $y = 2(x - 5)^2$

Vertex: _____
AOS: _____
Is the vertex a max or min? _____
Is there a stretch or compression? _____



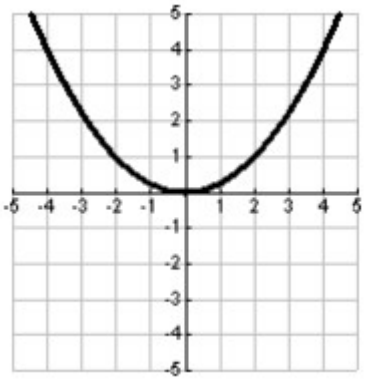
d) $y = -3(x + 1)^2 + 7$

Vertex: _____
AOS: _____
Is the vertex a max or min? _____
Is there a stretch or compression? _____

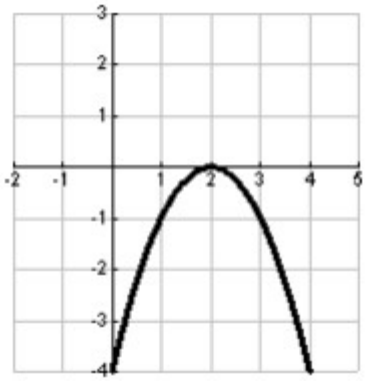


2. Write the equation of each parabola in vertex form.

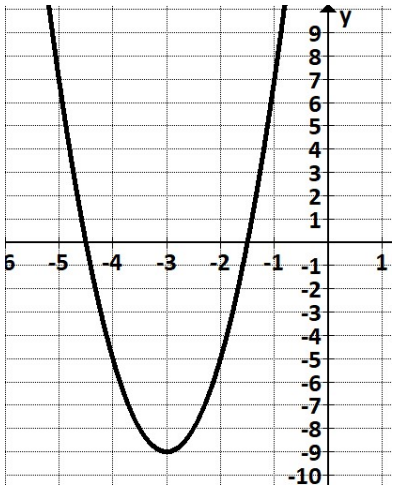
a) _____



b) _____



c) _____



3. Given the following information, determine the equation of the quadratic function in vertex form.

a) compressed by a factor of 2, opens down and has its vertex at (4, 2).

b) stretched by a factor of 3 with a minimum value of 5 and the axis of symmetry at $x = -1$.

4. Algebraically determine the equation of each of the following parabolas in vertex form.

a) Having a vertex (1, 2) and passing through the point (2, -5).

b) Having a vertex of (-3, -1) and a y-intercept of 17.

c) Having a vertex of (1, 4) and a zero of -3.

5. The vertex of a parabola is (-2, -4). One x-intercept is 7. What is the other x-intercept?