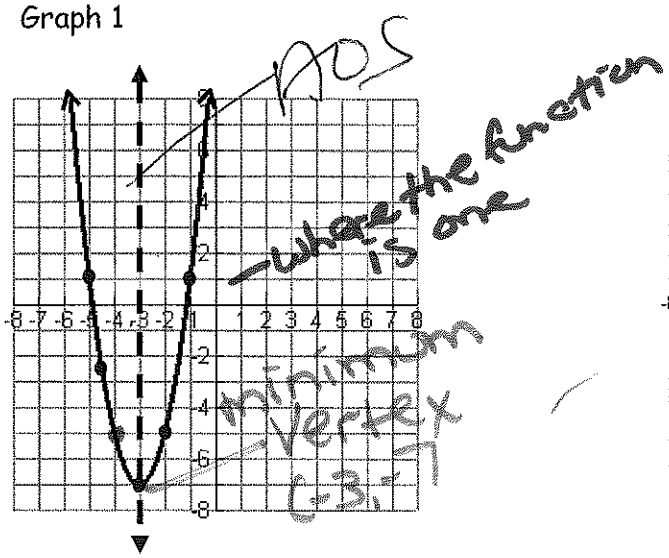
Quadratic Relationships with Graphs
Bell Ringer (AOS and Vertex)

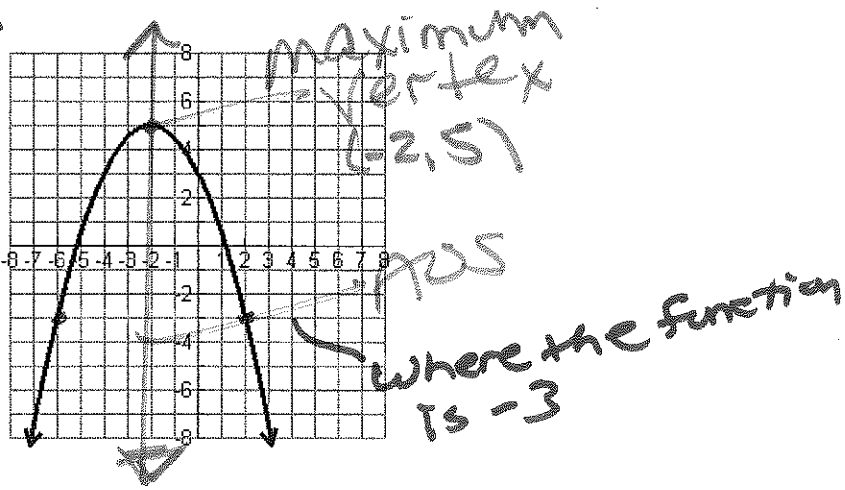
Name KEY

Date _____ Period 1 2 3 4 5 6 7

Graph 1



Graph 2



Use the graphs above to answer the following.

1. The axis of symmetry (AOS) is shown by a dashed line on Graph 1.
   a. Define axis of symmetry. Vertical line that divides the parabola into identical halves
   b. Write the equation of this vertical line. $x = -3$
   c. Why is it appropriate to draw an axis of symmetry on a parabola? Draw the axis of symmetry on Graph 2. Because a parabola is symmetrical
   d. Name the coordinate pairs of two corresponding points that are symmetrical.
   (-5, 1) (-1, 1); (-4, -5) (-2, -5)

2. The point (–3, –7) is the vertex of Graph 1.
   a. Define vertex. The minimum or the maximum point on the parabola; the AOS and the parabola intersect at the vertex
   b. Name the coordinate pair that represents the vertex of Graph 2. (-2, 5)
   c. Refine your definition of vertex after looking at Graph 2. max vertex

3. On Graph 1: $y = 1$
   a. What is the positive value of x where the function is one? DNE
   b. What is the negative value of x where the function is one? -1, -5

4. On Graph 2: $y = -3$
   a. What is the positive value of x where the function is -3? 2
   b. What is the negative value of x where the function is -3? -6