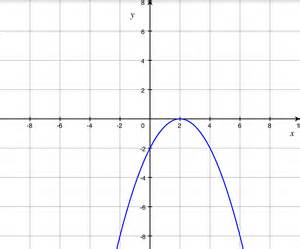
Classwork – Quadratics Review Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**You will be turning this in at the end of class for a grade.**

1. Use the graph to answer the following questions:

Part A: On what interval is the graph decreasing?

Part B: What is the vertex?

Part C: What is the average rate of change from to ?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

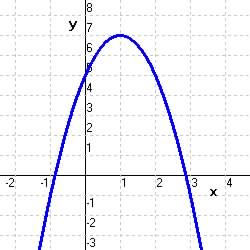
2. Rewrite the function in vertex form by completing the square. Find the vertex and the axis of symmetry.

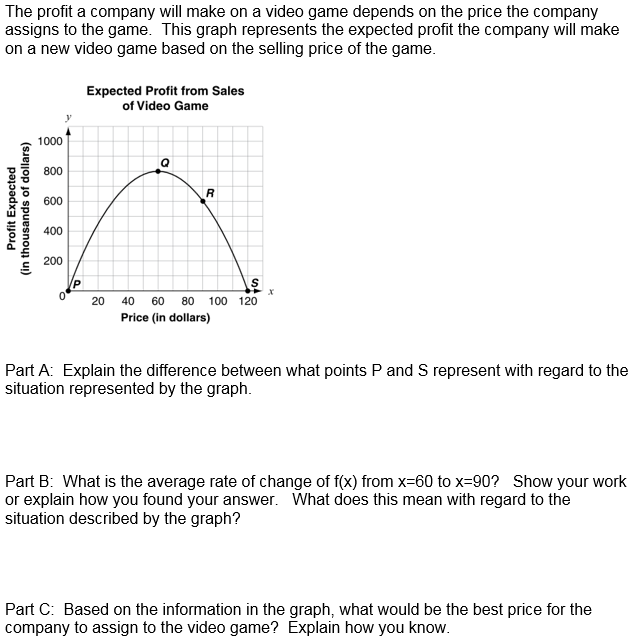
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

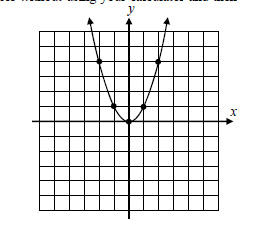
3. Use the quadratic formula to find the roots (zeros) of the function .

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

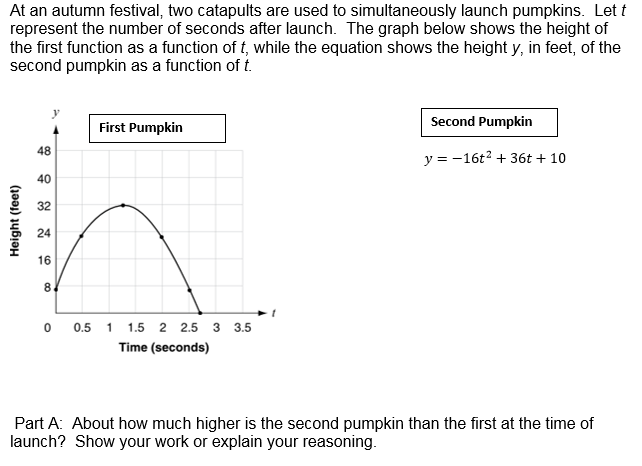
4. An object is launched at 24.4 meters per second (m/s) from a 62.1-meter tall platform. The equation for the object's height at time seconds after launch is , where  is in meters. When does the object strike the ground?

5. What is the domain and range, in inequality notation, of this graph?

6.



7. The coordinate plane below shows the graph of  
 . On the same graph, draw the following quadratic functions. You need to plot a minimum of five points.

8.

Part A: About how much higher is the second pumpkin than the first at the time of launch? Show your work or explain your reasoning.

Part B: What is the difference of the maximum heights of the two pumpkins? Show your work or explain your reasoning.