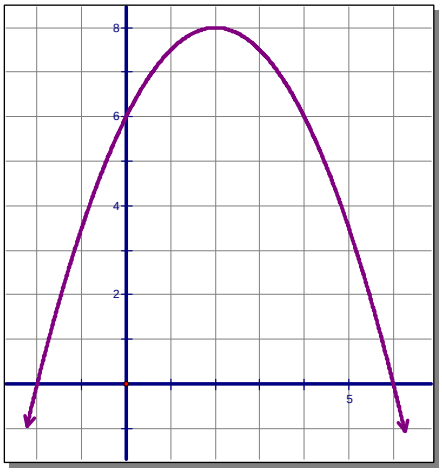
Interpreting Quadratic Relations

Name: _____

Jimmy the custodian kicks a ball off the roof down to the children waiting below.
The principal is comparing the time to the height of the ball. Here is a graph that the principal made of the data that he collected:

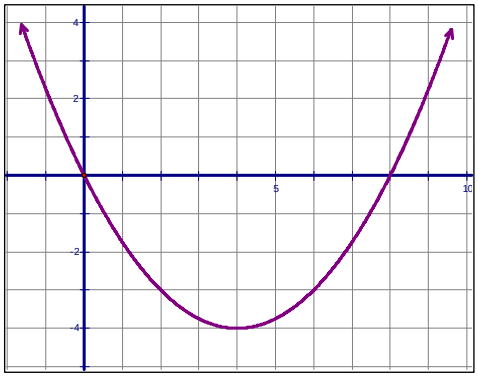


Vertex: (___, ___) Max/min value: _____

Equation of axis of symmetry: _____

Zeros: _____ or _____ y-intercept: _____

The curve of a satellite dish is designed to focus the TV signal being received. Here is a graph of the distance across the satellite dish compared to the depth of the satellite dish:

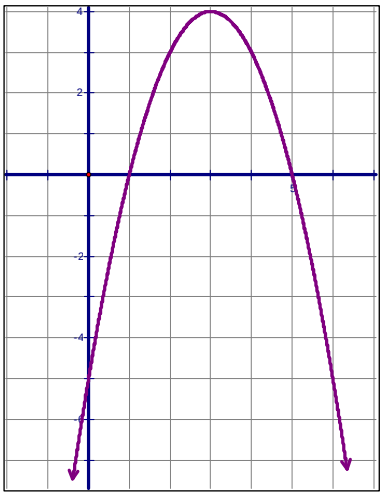


Vertex: (___, ___) Max/min value: _____

Equation of axis of symmetry: _____

Zeros: _____ or _____ y-intercept: _____

Beth is measuring the height of a rocket that she is trying to launch into the air. She is comparing the time to the height of the rocket. Here is a graph of Beth's data:

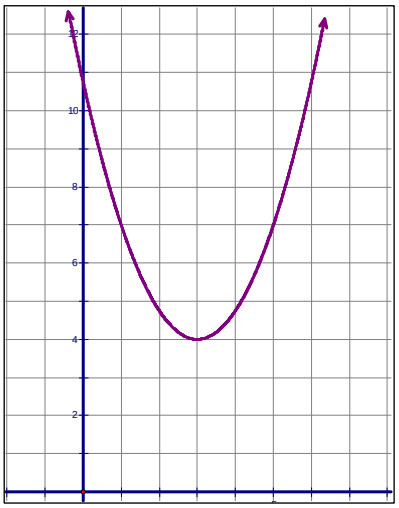


Vertex: _____ Max/min value: _____

Equation of axis of symmetry: _____

Zeros: _____ y-intercept: _____

Tom is playing with a yo-yo while his brother John I measuring the height of the yo-yo. Here is a graph of the data that John collected comparing the time after Tom threw the yo-yo to the height of the yo-yo.



Vertex: _____ Max/min value: _____

Equation of axis of symmetry: _____

Zeros: _____ y-intercept: _____

1. Select one of the relationships above and create a table of values based on the graph.
2. Find the second differences in the table of values you just created to prove that the relationship is quadratic
3. Select **two** of the other relationships and create a word problems that could be solved using the graph
4. Select **two** of the graphs and create different situations that could be described by the parabolas.