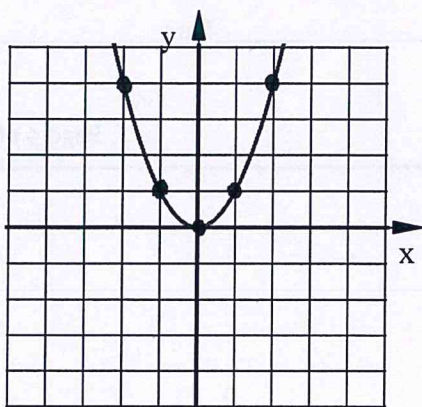


1. Below is the graph of the Parent Quadratic Function $y = x^2$ and its five main points.



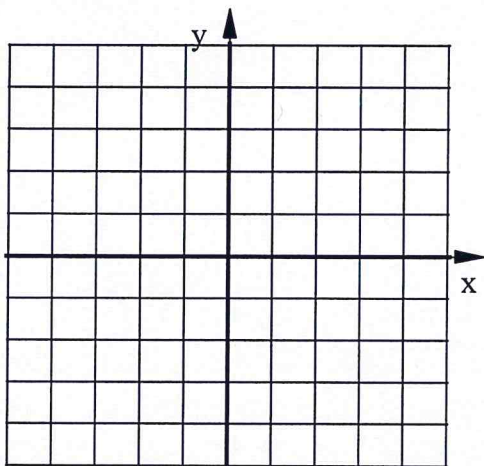
a. What are the coordinates of the Vertex?

b. In which directions and how far do you have to move in order to get from the Vertex to the first point on the right side of the parabola?

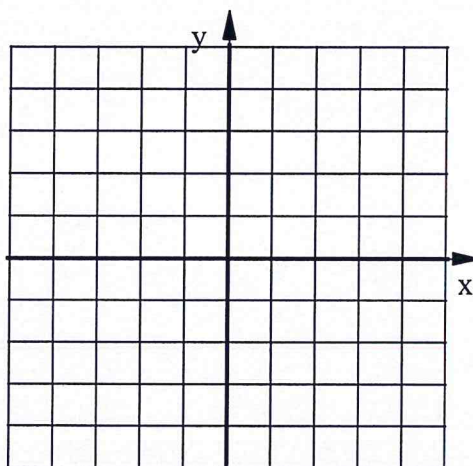
c. In which directions and how far do you have to move in order to get from the Vertex to the second point on the right side of the parabola?

Use the given description to graph each transformation of the Parent Quadratic Function using five points.

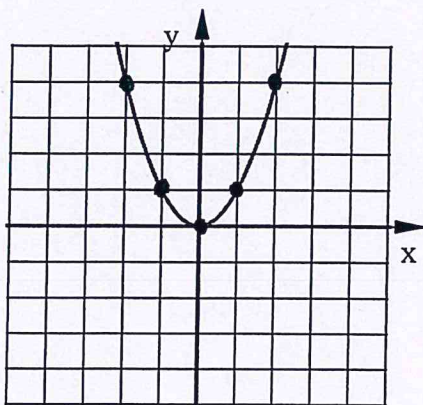
2. X-axis reflection and moved 2 left and 3 up.



3. Moved 5 down and twice as tall.



1. Below is the graph of the Parent Quadratic Function $y = x^2$ and its five main points.



a. What are the coordinates of the Vertex? $(0,0)$

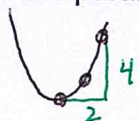
b. In which directions and how far do you have to move in order to get from the Vertex to the first point on the right side of the parabola?

1 unit right and 1 unit up



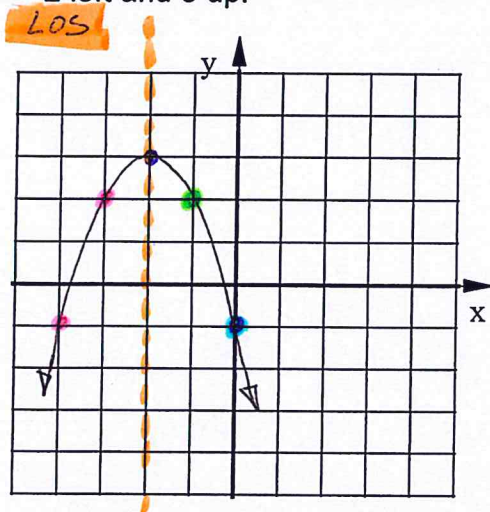
c. In which directions and how far do you have to move in order to get from the Vertex to the second point on the right side of the parabola?

2 units right and 4 units up.



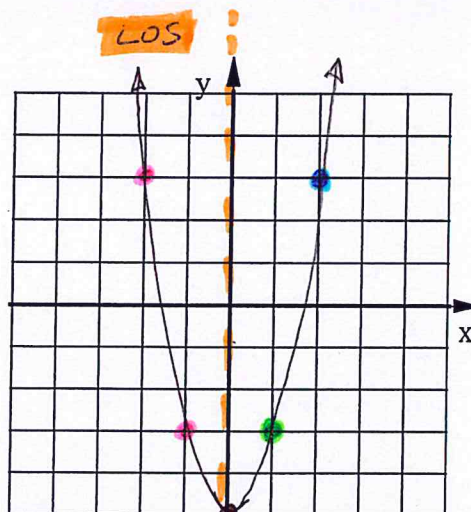
Use the given description to graph each transformation of the Parent Quadratic Function using five points.

2. X-axis reflection and moved 2 left and 3 up.



- vertex is at $(-2,3)$
- upside down
- 1st point instead of 1 right & 1 up will be 1 right & 1 down
- 2nd point instead of 2 right & 4 up will be 2 right & 4 down.

3. Moved 5 down and twice as tall.



- vertex is at $(0,-5)$
- 1st point instead of 1 right & 1 up will be 1 right and 2 up (twice as tall)
- 2nd point instead of 2 right & 4 up will be 2 right & 8 up (twice as tall)