

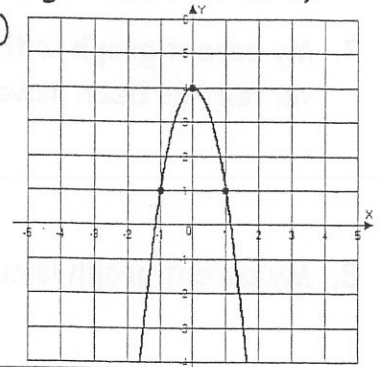
Instructions: For the following functions,

1. identify the parent function
2. describe each of the transformations to the parent function
3. sketch a graph of the function

Example: $y = -3x^2 + 4$

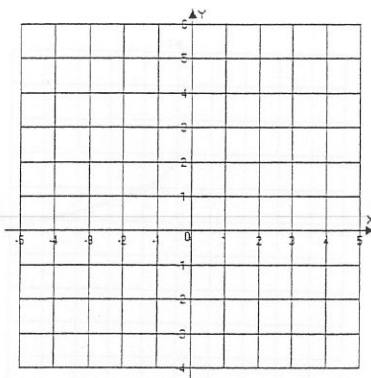
1. The parent function is the quadratic, $y = x^2$.
2. Transformations: Reflected across the y-axis (indicated by negative in front)
 Stretched by factor of 3 (indicated by the leading coefficient of 3)
 Shifted 4 units upward (as indicated by the +4)

3. Graph----->

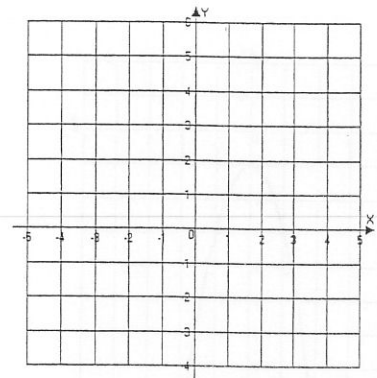


Your turn:

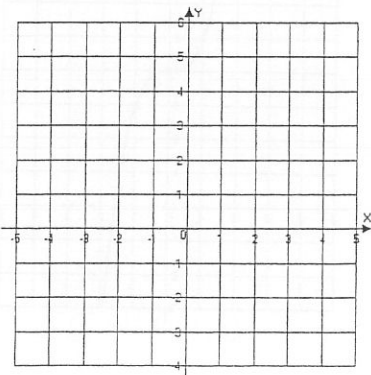
1. $y = -|x| + 4$



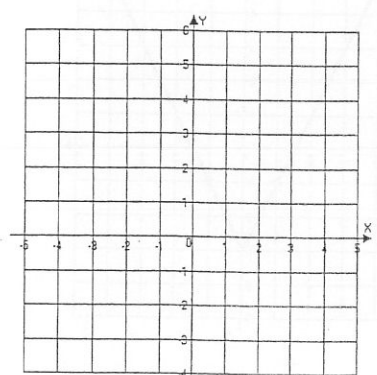
2. $y = -x^3 - 2$



3. $y = 2\sqrt{-x} + 2$



4. $y = \frac{1}{2}x^2 - 3$



For each of the problems below, use the clues to write a possible equation for the mystery function.

5. My parent graph is the square root function. I have been shrunk by a factor of 6. I have been shifted up 3 units. What is my equation?

6. My parent graph is the absolute value function. I have been reflected across the x-axis. I have been stretched by a factor of 2. What is my equation?

7. My parent graph is the quadratic function. I have been reflected across the x-axis. My vertex has been moved 2 spaces upward. What is my equation?

8. My parent graph is cubic. I have been moved 1 space down. What is my equation?

Based on your knowledge of graphing transformations, write a possible equation for the graph shown.

