Transformation Rules

Function Notation	Type of Transformation	Change to Coordinate Point
f(x)+d		(x, y) →
f(x)-d		(x, y) →
f(x+c)		(x, y) →
f(x-c)		(x, y) →
-f(x)		(x, y) →
f(-x)		(x, y) →
a*f(x)		(x, y) →
f(b*x)		(x, y) →

Exercises

Directions: Find the equations for the functions with the given conditions. Check your answers with the given graphing utility.

1) What is the equation of the graph of a parabola that has its minimum at the coordinate (0, 5)?

2) What is the equation of the graph of a cube that has a turning point at (4, 0)?

3) What is the equation of the graph of a cube that has a turning point at (0, -3)?

4) What is the equation of the graph of a parabola that has its minimum at the coordinate (-2, 0)?

5) What is the equation of a graph that is a parabola that has a maximum at (0, 6)?

6) What is the equation for a graph that is a parabola with its maximum at the coordinate (4, 3) and has been reflected over the x-axis?

7) What is an equation for the graph of a cube that has been reflected over the y-axis?

8) What is an equation of a cube that has been flipped over the x-axis?

9) What is the equation for the graph of a cube that has been flipped over the y-axis and has a turning point at (1, -3)?

10) Given the turning point of (2, 4), (-3,1), and (2, -5). Write an equation of a parabola for each point.