3-2

Practice

Families of Graphs

Describe how the graphs of f(x) and g(x) are related.

1. $f(x) = x^2$ and $g(x) = (x + 3)^2 - 1$

2. $f(x) = |x|$ and $g(x) = -|2x|$

Use the graph of the given parent function to describe the graph of each related function.

3. $f(x) = x^3$

a. $y = 2x^3$

b. $y = -0.5(x - 2)^3$

c. $y = |(x + 1)^3|$

4. $f(x) = \sqrt{x}$

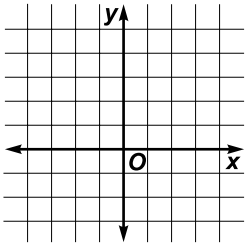
a. $y = \sqrt{x + 3} + 1$

b. $y = \sqrt{-x} - 2$

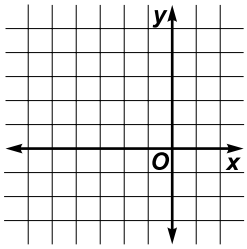
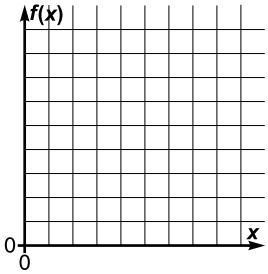
c. $y = \sqrt{0.25x} - 4$

Sketch the graph of each function.

5. $f(x) = -(x - 1)^2 + 1$



6. $f(x) = 2|x + 2| - 3$



7. ***Consumer Costs*** During her free time, Jill baby-sits the neighborhood children. She charges $4.50 for each whole hour or any fraction of an hour. Write and graph a function that shows the cost of x hours of baby-sitting.