For 1-7,
A Graph the parent function & transformation on

Name_____

Class _____ Date_____

Math Aids

1) How can the graph of g(x) = -2|x| be obtained from the graph of f(x) = |x|?

    A) Multiply each y-coordinate by -2. Reflect it across the x-axis.
    B) Multiply each y-coordinate by 2. Reflect it across the y-axis.
    C) Multiply each y-coordinate by -2. Reflect it across the y-axis.
    D) Multiply each y-coordinate by 2. Reflect it across the x-axis.

2) How can the graph of $g(x) = -\sqrt{x + 9}$ be obtained from the graph of $f(x) = \sqrt{x}$?

    A) Shift 9 units to the right. Reflect it across the x-axis.
    B) Shift 9 units to the left. Reflect it across the y-axis.
    C) Shift -9 units to the left. Reflect it across the x-axis.
    D) Shift 9 units to the left. Reflect it across the x-axis.

3) How can the graph of $g(x) = -2x^3 + 8$ be obtained from the graph of $f(x) = x^3$?

    A) Multiply each y-coordinate by 2. Reflect it across the y-axis. Shift it 8 units upward.
    B) Multiply each y-coordinate by 8. Reflect it across the x-axis. Shift it 2 units upward.
    C) Multiply each y-coordinate by 2. Reflect it across the x-axis. Shift it 8 units upward.
    D) Multiply each y-coordinate by -2. Reflect it across the x-axis. Shift it 8 units downward.

4) How can the graph of $g(x) = (x - 9)^2 - 10$ be obtained from the graph of $f(x) = x^2$?

    A) Shift 10 units to the right and 9 units downward.   B) Shift 9 units to the right and 10 units downward.
    C) Shift 9 units to the left and 10 units upward.   D) Shift 9 units to the left and 10 units downward.

5) How can the graph of $g(x) = \dfrac{3}{x} + 1$ be obtained from the graph of $f(x) = \dfrac{1}{x}$?

    A) Shift it 3 units to the left and 1 units down.
    B) Shift it 3 units to the right and 1 units up.
    C) Multiply each y-coordinate by $\dfrac{1}{3}$. Shift it 1 units up.
    D) Multiply each y-coordinate by 3. Shift it 1 units up.

6) How can the graph of $g(x) = -(x - 7)^2 + 11$ be obtained from the graph of $f(x) = x^2$?

    A) Shift it 7 units to the right. Reflect it across the y-axis. Shift it 11 units up.
    B) Shift it 7 units to the left. Reflect it across the x-axis. Shift it 11 units up.
    C) Shift it 7 units to the right. Reflect it across the y-axis. Shift it 11 units down.
    D) Shift it 7 units to the right. Reflect it across the x-axis. Shift it 11 units up.