

PRECAL HONORS

Name _____

1.1 – TRANSFORMING FUNCTIONS

Describe a sequence of transformations that will turn the graph of $f(x)$ into the graph of $g(x)$.

1. $f(x) = x^3$; $g(x) = \frac{1}{3}x^3 - 1$

2. $f(x) = \sqrt{x}$; $g(x) = \sqrt{x-1} - 1$

3. $f(x) = |x|$; $g(x) = 2|x| + 3$

4. $f(x) = x^2$; $g(x) = \left(\frac{1}{3}x\right)^2 - 2$

Sketch the graph of each function.

5. $y = (x+1)^3 - 1$

6. $y = \sqrt{x+1} - 1$

7. $y = \frac{1}{2}|x| + 3$

8. $y = (x-1)^2 + 1$