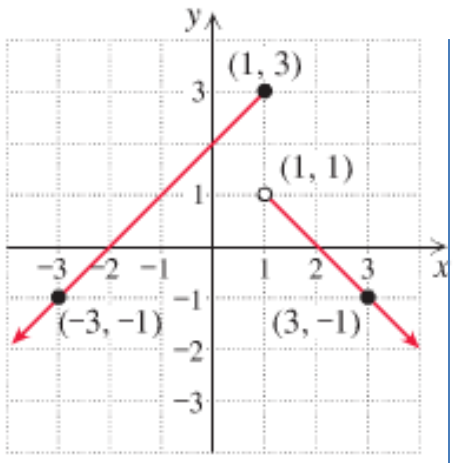
121-G12 Quiz 6, S 2.1 – 2.5
Fall, 2012 Name_____

1. Sketch the graph of $f(x)=\begin{cases}3 & \text{for } x<2\\ 1 & \text{for } x\geq 2\end{cases}$. State its Domain and Range.

2. Write a piecewise function for the given graph.



$f(x)=$

3. Sketch the graph of $y=3|x-2|$ by transforming a basic function.

4. Let $f = \{(-3,1),(0,4),(2,0)\}$ and $g = \{(-3,2),(1,2),(2,6)\}$. Find each function:

   a. $f \circ g$

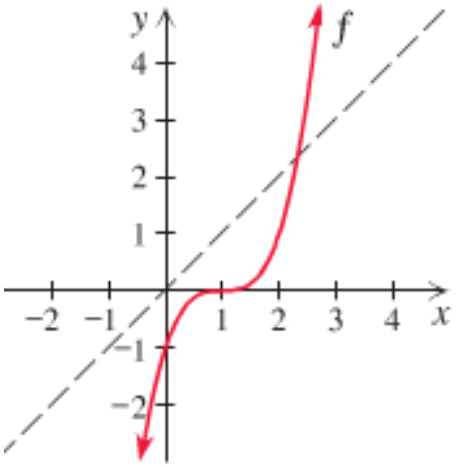
   b. $g \circ f$

5. Let $f(x) = 3x - 1$ and $h(x) = \dfrac{x+1}{3}$. Find $(h \circ f)(-7)$

6. Let $f(x) = (x-2)^3$. Find functions $g(x)$ and $h(x)$ such that $f = h \circ g$

7. Find the inverse of $f(x) = -x^3 + 4$

8. Given the sketch of f, sketch the graph of f^{-1}.



9. Bonus: PROVE that $f(x) = \dfrac{2x-1}{x-6}$ is 1-to-1. (Next quiz/test, I'm likely to ask you to find the inverse of something like this.)