Math 1060Q Name: _____

Inverse Functions

1. Let $f(x) = x^3 - 5$. Which of the following is true?

   A. $f^{-1}(2) = 3$

   B. $f^{-1}(0) = 2$

   C. $f^{-1}(-4) = 1$

   D. $f^{-1}(1) = 4$

2. Let's say $g(2) = 5$. Which of the following might be the inverse of g?

   A. $g^{-1}(x) = x + 3$

   B. $g^{-1}(x) = x - 3$

   C. $g^{-1}(x) = 2x - 7$

   D. $g^{-1}(x) = x$

3. Let $f(x) = \dfrac{x-3}{2}$. Which of the following is the inverse of f?

   A. $f^{-1}(x) = \dfrac{x+3}{2}$

B. $f^{-1}(x) = \dfrac{2}{x-3}$

C. $f^{-1}(x) = \dfrac{3-x}{2}$

D. $f^{-1}(x) = 2x + 3$

4. Find the inverse function, f^{-1}, for each of the following functions.

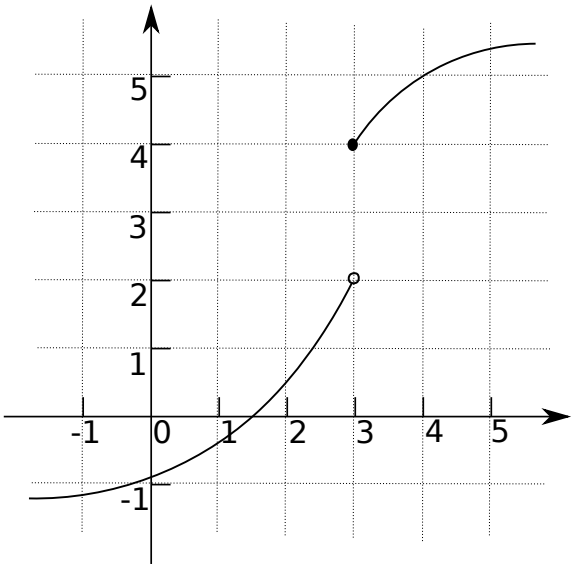
(a) $f(x) = \dfrac{x}{2} - 3$

(b) $f(x) = x^3 + 2$

(c) $f(x) = \sqrt[3]{x+1}$

(d) $f(x) = \dfrac{2x-3}{x-1}$

5. Let f be given by the following graph.



(a) What is $f^{-1}(5)$?

(b) What is $f^{-1}(1)$?

6. Let g be given by the following graph. Sketch a graph of g^{-1}.