COLLEGE REVIEW MATH
SECTION 4-5 REVIEW
Inverse Functions

Name _____

Suppose the function *f* has an inverse and f(-2) = 3, f(2) = -1, f(5) = -2 and f(3) = 0, then find:

1) $f^{-1}(3)$ = _____

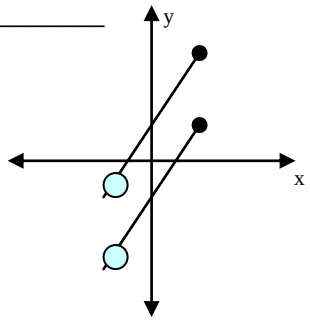
2) $f(f^{-1}(-1))$ = _____

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

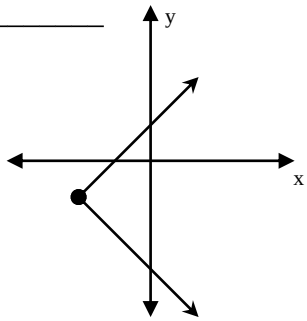
4) $f^{-1}(f^{-1}(0))$ = _____

Determine if the following graphs have an inverse.

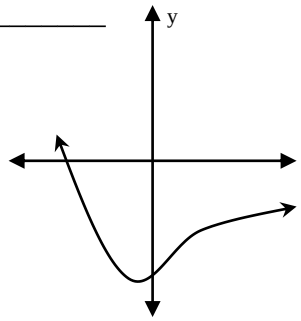
5) _____



6) _____



7) _____



Find a rule for the inverse of each function. (you may assume one exists)

8) f(x) = 5x – 3

9) $g(x) = \frac{1}{2}x + 6$

10) $h(x) = x^3 + 3$

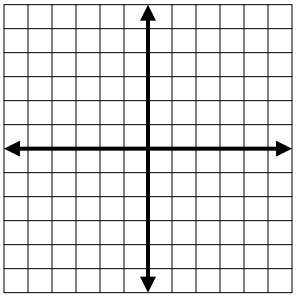
11) $f(x) = (x + 5)^2$; $x \geq -5$

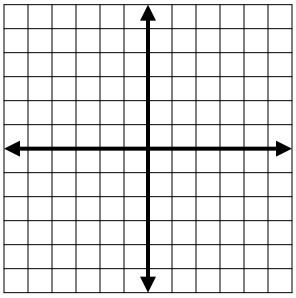
Sketch the graph for f(x) and $f^{-1}(x)$ on the same set of axes, then find a rule for $f^{-1}(x)$.

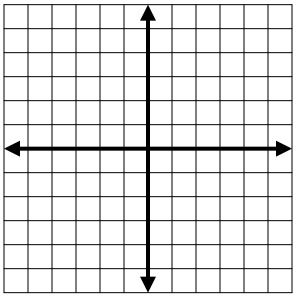
12) $f(x) = \frac{1}{2}x - 1$

13) $f(x) = (x-1)^2 - 4;\ x \leq 1$

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







Prove (or disprove) that f(x) and g(x) are inverses of one another.

15) $f(x) = \frac{1}{x^3}$

$g(x) = \sqrt[3]{x}$

16) $f(x) = \frac{2}{3}x + \frac{1}{2}$

$g(x) = \frac{3}{2}x + \frac{3}{4}$

17) $f(x) = \sqrt{6-x}$

$g(x) = 6 - x^2$