

Algebra 2  
Inverses of Functions Algebraically # 2

Name Key

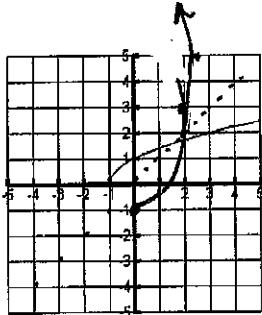
Graph the inverse of the following functions on the same set of axes.

$$f(x)$$

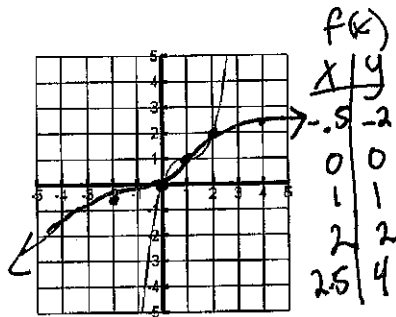
x	y
-1	0
3	2
5	2.3

$$f^{-1}(x)$$

x	y
0	-1
2	3
2.3	5



2.



$$f^{-1}(x)$$

x	y
-2	-0.5
0	0
1	1
2	2
4	2.5

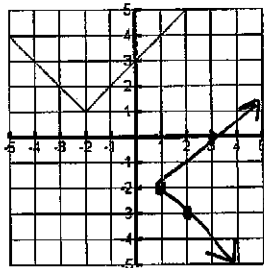
3.

$$f(x)$$

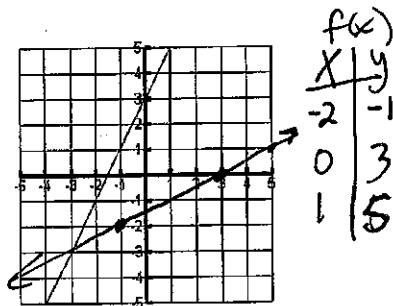
x	y
-2	1
-3	2
0	3

$$f^{-1}(x)$$

x	y
1	-2
2	-3
3	0



4.



$$f^{-1}(x)$$

x	y
-1	-2
3	0
5	1

Find the inverse of the following equations.

5.  $y = 3x - 1$

$$x = 3y - 1$$

$$\frac{x+1}{3} = \frac{3y}{3} \quad \boxed{y = \frac{x+1}{3}}$$

8.  $y = x^2 + 4$

$$x = y^2 + 4$$

$$x - 4 = y^2$$

$$\boxed{y = \pm \sqrt{x-4}}$$

6.  $y = \frac{1}{2}x - 5$

$$x = \frac{1}{2}y - 5$$

$$2(x+5) = \frac{1}{2}y$$

$$\boxed{y = 2x + 10}$$

9.  $y = \frac{(x+2)^2}{2}$

$$\sqrt{x} = \frac{(y+2)}{2}$$

$$\pm \sqrt{x} = y + 2$$

$$\boxed{y = -2 \pm \sqrt{x}}$$

7.  $y = \sqrt{x+3}$

$$x^2 = (\sqrt{y+3})^2$$

$$x^2 = y + 3$$

$$\boxed{y = x^2 - 3}$$

10.  $y = \frac{1}{x+2}$

$$(y+2)x = \frac{1}{y+2} \cdot (y+2)$$

$$(y+2)x = 1$$

$$\boxed{y = \frac{1}{x} - 2}$$