

Algebra II
Inverses

Name _____

Find the inverse of the function, then graph the function and its inverse.

1. $f(x) = 6x$

2. $f(x) = -3x + 5$

3. $f(x) = x^3 - 3$

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

5. $f(x) = \sqrt{x} - 4$

6. $f(x) = (x-4)^2, x \geq 4$

Determine whether each pair of functions f and g are inverses.

7.

x	-2	-1	0	1	2
f(x)	-2	1	4	7	10

8.

x	2	3	4	5	6
f(x)	8	6	4	2	0

x	-2	1	4	7	10
g(x)	-2	-1	0	1	2

x	2	3	4	5	6
g(x)	-8	-6	-4	-2	0

For #9 and #10, describe the error in finding the inverse and then correct it.

9. $f(x) = -x + 3$

$y = -x + 3$

$-x = y + 3$

$-x - 3 = y$

10. $f(x) = 7x^2, x \geq 0$

$y = 7x^2$

$x = 7y^2$

$\frac{x}{7} = y^2$

$\pm\sqrt{\frac{x}{7}} = y$