

Topic 8.8  
Inverse Functions and Relations  
Homework

Name: \_\_\_\_\_  
Date: \_\_\_\_\_

**Find the inverse of each relation and determine whether the inverse is a function.**

1.  $\{(2,5), (3,1), (4,8)\}$       2.  $\{(2,-2), (-3,3), (-4,-4)\}$       3.  $\{(2,1), (2,3), (2,7)\}$

**Find the inverse of each function.**

4.  $y = 3x$

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

6.  $y = x^2 - 9$

7.  $f(x) = \sqrt{\frac{x}{6}}$

8.  $f(x) = (x^2 - 4)^2$

9.  $y = (x+5)^2 - 2$

**Determine whether each pair of functions are inverse functions. Show all of your work!**

10.  $f(x) = 2x - 4$

11.  $f(x) = \frac{2x+5}{3}$

12.  $f(x) = \frac{8}{x-7}$

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

$g(x) = \frac{3x-5}{2}$

$g(x) = \frac{8}{x+7}$