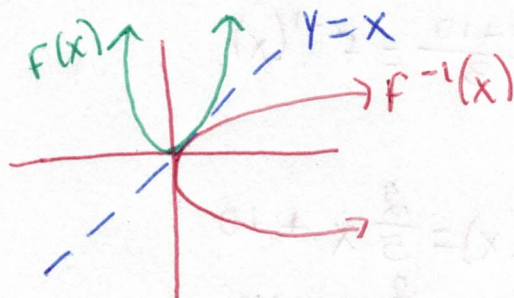
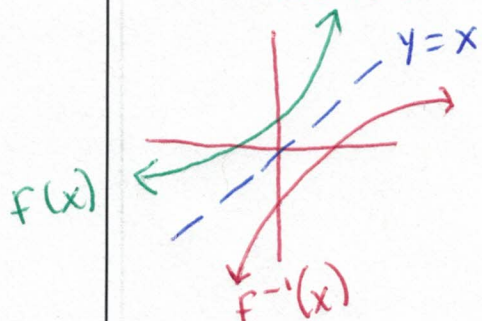


# Inverse Functions

UNIT 8 LESSON \_\_\_\_\_ INVESTIGATION \_\_\_\_\_ NOTES

## Lesson Vocabulary

Inverse function  $f^{-1}(x)$  - Reverses the action of a function. Its graph is a reflection over the line  $y=x$ .



Find the inverse  $f^{-1}(x)$

1. Switch  $x$  and  $y$
2. Solve for  $y$  (this is the inverse)

Example Problem(s)

ex.) find the rule of the inverse.

$$a) f(x) = 3x - 10$$

$$x = 3y - 10$$

$$x + 10 = 3y$$

$$\frac{x+10}{3} = f^{-1}(x)$$

$$b) g(x) = \frac{2}{5}x + 10$$

$$x = \frac{2}{5}y + 10$$

$$5(x-10) = 2y$$

$$5(x-10) = 2y$$

$$\frac{5(x-10)}{2} = g^{-1}(x)$$

$$c) h(x) = 0.5x - 2$$

$$x = 0.5y - 2$$

$$x + 2 = 0.5y$$

$$\frac{x+2}{0.5} = h^{-1}(x)$$