## Algebra 1

Our Goal: To learn to find the inverse of a function

Warm Up: Check and discuss homework

#### Today's Homework:

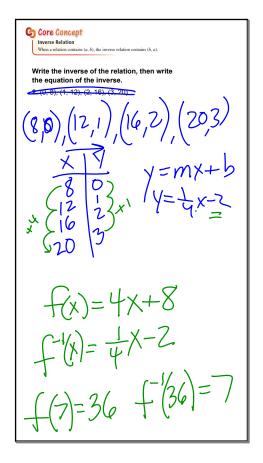
- 10.4 Textbook Exercises, p.572-573: 4-32 (evens)
- iready due today, if needed

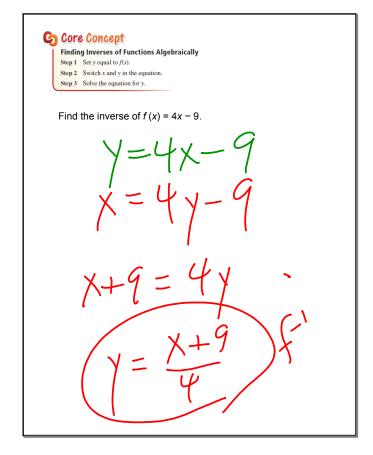
### **Previous Homework**

10.3 Textbook Exercises, p.564: 4-34 (evens)

#### Find the equation of the function.

**1.** (0, 8), (1, 12), (2, 16), (3, 20)





Find the inverse of the function. Then graph the function and its inverse.

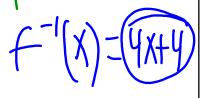
**3.** 
$$f(x) = 6x$$

1. 
$$f(x) = -x + 5$$

**5.** 
$$f(x) = \frac{1}{4}x - 1$$

$$f(x) = \frac{x}{6} \quad x = -x + 5$$

$$-1(\chi)-\frac{\chi_{+1}}{0.25}$$



Find the inverse of  $f(x) = x^2$ ,  $x \ge 0$ . Then graph the function and its inverse.

desmos syntax:

- $f(x) = \{ x \ge 0 : x^2 \}$
- y = f(x)
- x = f(y)

# G Core Concept

#### **Horizontal Line Test**

The inverse of a function f is also a function if and only if no horizontal line intersects the graph of f more than once.

Consider the function  $f(x) = x^2 + 3$ 

Determine whether the inverse of *f* is a function.

Consider the function  $f(x) = \sqrt{x+2}$ .

Determine whether the inverse of *f* is a function.

Then find the inverse.