

Example 5:

a) Determine algebraically if  $y = 7x - 3$  and  $y = \frac{x+3}{7}$  are inverses of each other.

$$y = 7x - 3$$

$$x = 7y - 3$$

$$\frac{x+3}{7} = \frac{7y}{7}$$

$$\frac{x+3}{7} = y \quad \text{yes, they are inverse.}$$

b) Determine algebraically whether the functions  $y = -x^2 + 3, x \geq 0$  and  $y = \sqrt{3-x}$  are inverses of each other.

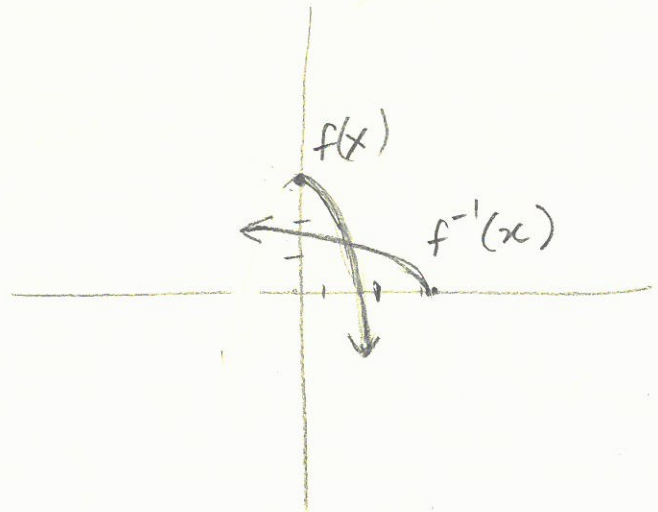
$$y = -x^2 + 3$$

$$x = -y^2 + 3$$

$$\frac{x-3}{-1} = \frac{-y^2}{-1}$$

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

$$\sqrt{-x+3} = y$$



**Assignment Time!** Work on p.243- 4-10, 12-14, MC 1&2