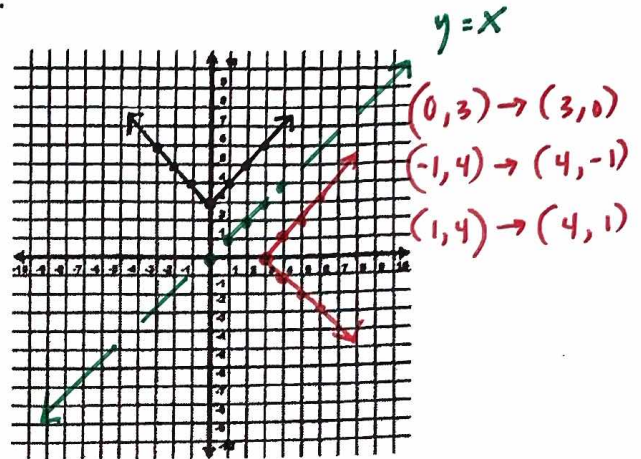
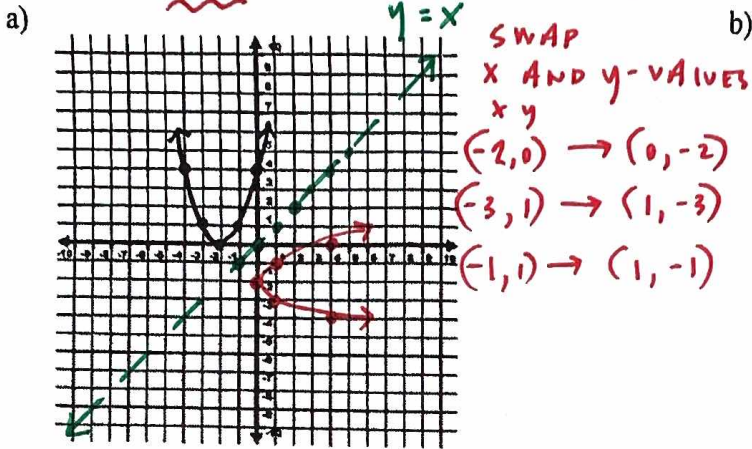


AA PREP—INTRODUCTION TO INVERSES LECTURE

EX 1: Graph the inverse of each function. Draw in the reflection line.



EX 2: Find the inverse of each function. Graph the function and its inverse on the same coordinate plane.

a) $f(x) = 2x - 6$

$y = 2x - 6$

SWAP X AND y-VALUES

$$x = 2y - 6$$

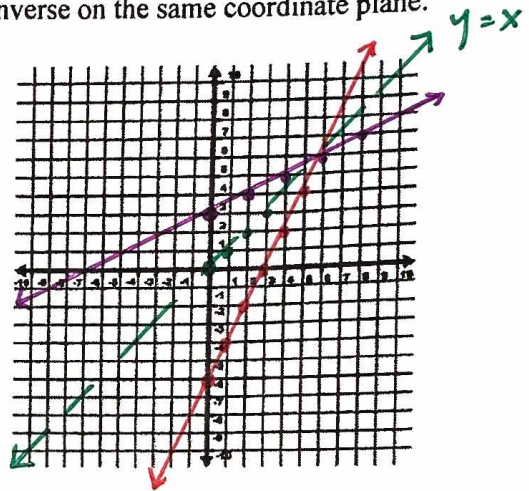
$$x + 6 = 2y$$

$$\frac{x + 6}{2} = \frac{2y}{2}$$

$$y = \frac{x}{2} + 3$$

$$y = \frac{1}{2}x + 3$$

$f^{-1}(x) = \frac{1}{2}x + 3$



b) $g(x) = x^2 + 2$

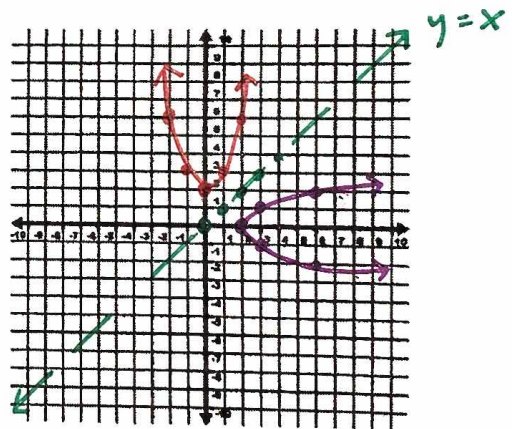
$y = x^2 + 2$

$$x = y^2 + 2$$

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

$$y = \pm \sqrt{x - 2}$$

$y = \sqrt{x - 2}$
 $y = -\sqrt{x - 2}$



c) $h(x) = (x - 1)^3$

$y = (x - 1)^3$

$$\sqrt[3]{x} = \sqrt[3]{(y - 1)^3}$$

$$\sqrt[3]{x} = y - 1$$

$$y = \sqrt[3]{x} + 1$$

$h^{-1}(x) = \sqrt[3]{x} + 1$

