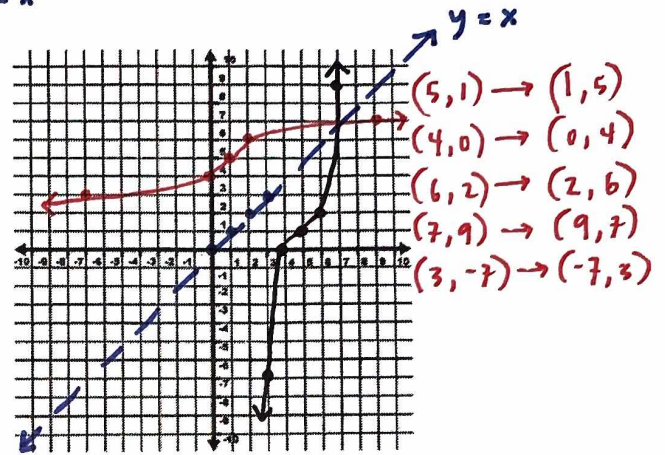
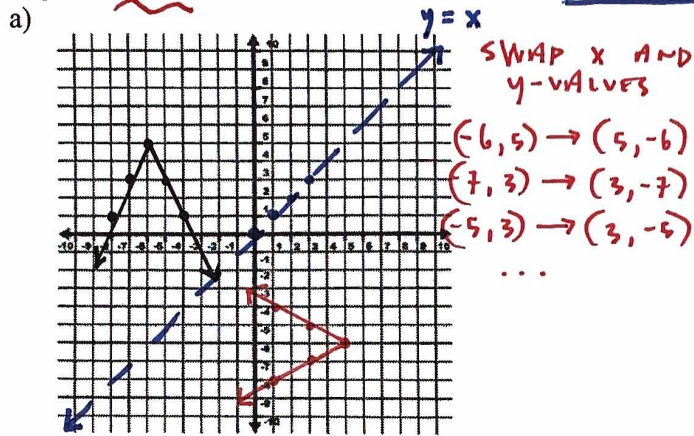


AA PREP—INTRODUCTION TO INVERSES WORKSHEET #2

KEY

1. Graph the inverse of each function. Draw in the reflection line. $y = x$



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

a) $f(x) = \frac{x}{3} + 2$

SWAP X AND Y-VALUES

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

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

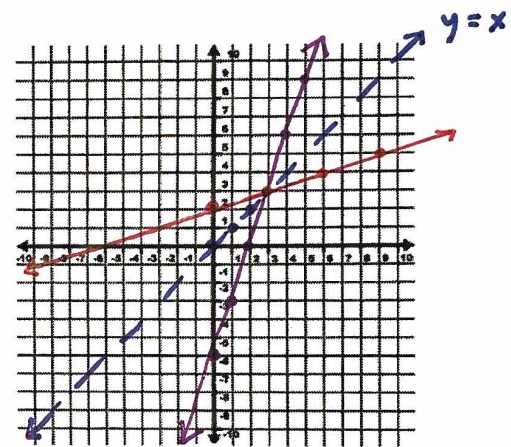
$-2 \quad -2$

$3(x-2) = \frac{y}{3} \cdot 3$

$3x - 6 = y$

$y = 3x - 6$

$f^{-1}(x) = 3x - 6$



b) $g(x) = \sqrt{x+4}$

$y = \sqrt{x+4}$

$(x)^2 = (\sqrt{y+4})^2$

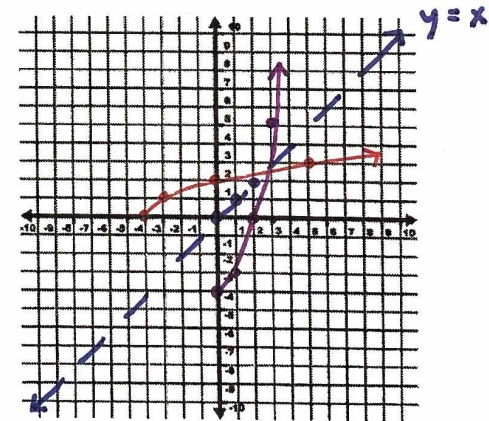
$x^2 = y + 4$

$-4 \quad -4$

$x^2 - 4 = y$

$y = x^2 - 4$

$g^{-1}(x) = x^2 - 4$
 + ONLY WHEN $x \geq 0$



c) $h(x) = x^3 - 2$

$y = x^3 - 2$

$x = y^3 - 2$

$+2 \quad +2$

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

$\sqrt[3]{x+2} = y$

$y = \sqrt[3]{x+2}$

$h^{-1}(x) = \sqrt[3]{x+2}$

