

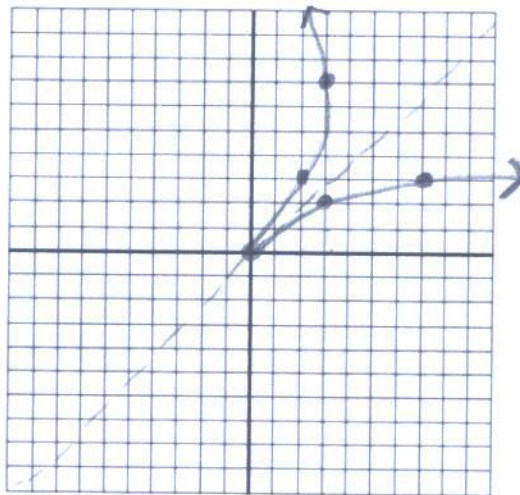
15) Find the inverse of $f(x) = -3x + 3$.

$$\frac{x = -3y + 3}{-3 \quad -3}$$

$$\frac{x-3}{-3} = \frac{-3y}{-3}$$

$$\boxed{\frac{-x+3}{3} = y}$$

16) Graph the inverse.



17) Show that $f(x) = 2x - 1$ and $g(x) = \frac{x}{2} + \frac{1}{2}$ are inverses of each other.

$$2\left(\frac{x}{2} + \frac{1}{2}\right) - 1$$

$$\frac{x+1-1}{\boxed{=x}}$$

$$\frac{2x-1}{2} + \frac{1}{2}$$

$$x - \frac{1}{2} + \frac{1}{2} \boxed{=x}$$

18) Given the parent function, write the equation for the transformed function, $g(x)$.

A. $f(x) = x^2$

$g(x)$ is shifted right 4 units and down 3 units.

$$\underline{g(x) = (x-4)^2 - 3}$$

B. $f(x) = \sqrt{x}$

$g(x)$ is stretched vertically by a factor of 5 and translated right 4 units.

$$\underline{g(x) = 5\sqrt{x-4}}$$

19) Given the equation $f(x) = (x+4)^2 + 4$. Write the equation of the function $g(x)$ that would be translated 2 units to the left and 1 unit up.

$$\underline{g(x) = (x+6)^2 + 5}$$