

## Day 2 on 1.6

\*\*\*For 42, 43, 49, and 52 do not follow the directions but please apply the horizontal line test.

## I. Find the inverse.

Ex 1)  $f(x) = x^3 - 4$

$$y = x^3 - 4$$

switch  $x$ 's &  $y$ 's

$$x = y^3 - 4$$

Solve for  $y$

$$x + 4 = y^3$$

$$\sqrt[3]{x+4} = y = f^{-1}(x)$$

Ex 2)  $f(x) = \sqrt{2x - 3}$

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

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

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

$$\begin{array}{r} +3 \qquad +3 \\ \hline x^2 + 3 = 2y \end{array}$$

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

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