

FUNCTIONS

Domain - Set of x-coord

Range - Set of y-coord.

$$f(x) = \sqrt{x^2 - 4} \quad [-5, 8] \times [-9, 12]$$

$$\text{Domain: } [-5, -2] \cup [2, 8]$$

$$\text{Range: } [0, 2\sqrt{5}]$$

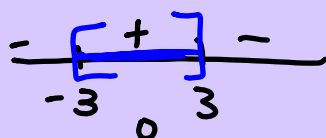
$$f(x) = \frac{2x}{(x+3)(x+4)}$$

Denom $\neq 0$

$$x \neq -3, -4$$

$$f(x) = \sqrt{9-x^2}$$

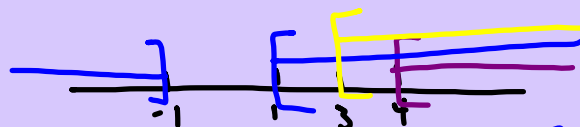
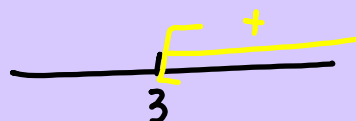
Even Roots (must contain + values)
Test pts!



$$[-3, 3]$$

$$f(x) = \sqrt{x-3} \quad g(x) = \sqrt{x^2-1}$$

$$(g \circ f)(x) = \sqrt{(\sqrt{x-3})^2 - 1} = \sqrt{x-3-1} = \sqrt{x-4}$$



All 3 overlap at:

$$[4, \infty)$$

How to do #55:

f = maroon

g = blue

$$(f \circ g)(2) =$$

$$g(2) = 6$$

$x \quad y$

$$f(6) = -4$$

(Find y coord of g when $x=2$)

(Find y -coord of f at $x=6$)

