

Test Notes

ch9

function notation

$f(x) \rightarrow f$ of x , a function

ex

$$f(x) = 2x - 1$$

1. $f(3) = 2(3) - 1 = 5$

2. x when $f(x) = 10$

$$10 = 2x - 1$$

$$11 = 2x$$

$$11/2 = x$$

$$x = 3, y = ?$$

$$y = 10, x = ?$$

Composition of functions

$$f(\underbrace{g(x)}_{\text{inside}}) = (f \circ g)(x)$$

* work from the inside, out

ex $f(x) = 2x + 3$ $g(x) = x^2$

1. $f(g(x)) = f(x^2) = 2(x^2) + 3$
 $= 2x^2 + 3$

2. $(g \circ f)(x) = g(f(x)) = g(2x + 3) = (2x + 3)^2$
 $= 4x^2 + 12x + 9$

function?

- * check with vertical line test
- * no doubling in x -values.

Graphing

$y = \sqrt{x}$ (radical) * same graphing rules apply!

