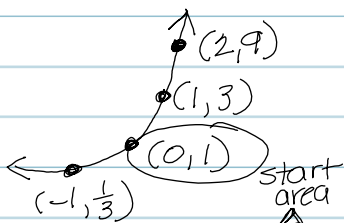


HW QUESTIONS

#85
Δ = change



$$y = A \cdot b^{x-h} + k$$

start: $(0, 1)$; $b = 3$
 $(h, k) = (0, 0)$

start: $(0, 1)$
 $(h, k) = (0, 0)$
 $(0, 1)$

Ex: $y = (x-3)^2 + 4$
 $(h, k) = (3, 4)$
 start $(0, 0)$
 $3, 4$

$$y = A \cdot b^{x-h} + k$$

$$y = A \cdot 3^{x-0} + 0$$

$$y = A \cdot 3^x$$

$$3 = A \cdot 3^1$$

$$1 = A$$

*choose another point $(1, 3)$

$y = 3^x$

SECTION 6.1

COMPOSITION OF FUNCTIONS

- takes one function and places it inside another.
 (multi-step process)

$f \circ g(x) = f(g(x))$ "f of g of x"

$g \circ f(x) = g(f(x))$ "g of f of x"

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

$f \circ g(x) = f(g(x)) = f(\sqrt{x+3})$
 *start from the inside & go outside
 $= \sqrt{x+3} - 2$

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

$\otimes x+3 \geq 0$
 $x \geq -3$
 $\otimes x+3 \geq 0$
 $x \geq -3$
 SAME, SO
 $D: [-3, \infty)$

\otimes Look @ the process \rightarrow to find the domain

$= g(x-2) = \sqrt{x-2} + 3 = \sqrt{x+1}$
 \downarrow
 \mathbb{R}

\downarrow
 $x+1 \geq 0$
 $x \geq -1$
 $D: [-1, \infty)$