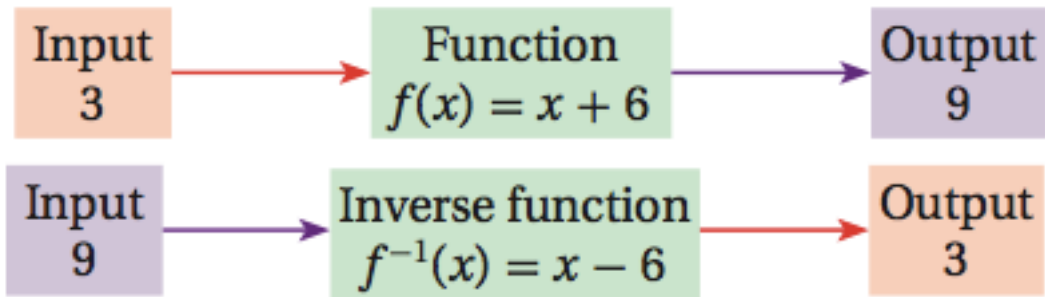


Inverse Functions
Springboard 6.1
L11

Warm-up
Solve for y
(i.e $y=3x$)

- 1) $2xy = 5$
- 2) $3x + 2y = 10$
- 3) $5xy + 30 = 5$

Functions that undo each other are inverse functions.



I do:

Find the inverse function of

$$y = 2x + 3$$

Original Function	$y = 2x + 3$
Swap "x" and "y"	$x = 2y + 3$
Solve for y	$x - 3 = 2y$ $\frac{x - 3}{2} = y$ $\frac{x - 3}{2} = y^{-1}$

We Do:

Find the inverse function of

$$y = \frac{1}{3}x - 10$$

Original Function	$y = \frac{1}{3}x - 10$
Swap "x" and "y"	

Solve for y	

We do:

Find the inverse function of

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

Original Function	
Swap "x" and "y"	
Solve for y	

You do:

Left Talk, Right Write

On your Whiteboards with your partner

1) Find the inverse function of

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

2) Find the inverse function of

$$g(x) = 4(x + 1)$$

Closure: discuss with your partners about the steps needed to find the inverse of a function.