

11.1.2 # 16-25 (skip 19)

11-16

x	3	4	-3
y	13	16	-5

a.)

- Multiply by 3
  - Add 64
- } words

$f(x) = 3x + 4$  } rule

b.) Inverse Function:  $f^{-1}(x)$

13	16	-5
↓	↓	↓
3	4	-3

- c.)
- Subtract 4
  - Divide by 3

d.)  $f^{-1}(x) = \frac{x-4}{3}$

11-17 a.)  $g(x) = \frac{5x-8}{2} \rightarrow g(3) = \frac{5(3)-8}{2}$

*original function*

$g(3) = \frac{15-8}{2}$

$g(3) = \frac{7}{2}$

b.)

- Multiply by 2
- Add 8
- Divide by 5

*Inverse function*

$g^{-1}(x) = \frac{2x+8}{5}$

11-18 a.)  $n(x) = 4x - 12$

*swapped input/output*

$x = 4n^{-1}(x) - 12$

$\frac{x+12}{4} = \frac{4n^{-1}(x)}{4}$

$n^{-1}(x) = \frac{x+12}{4}$

b.)  $j(x) = \frac{x-7}{10}$

$10(x) = \frac{j^{-1}(x)-7}{10}$

$10x = \frac{j^{-1}(x)-7}{10}$

$j^{-1}(x) = 10x + 7$