Pg. 265(1-13)

(1) Function
many to one

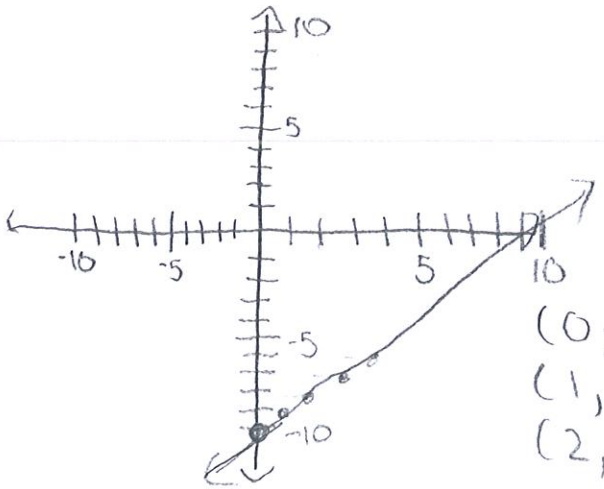
(2) NO!
0 has 2 outputs

(3) $y = 10(x)$
$y = 10(-3)$
$y = -30$

(4) $y = 6 - 2(x)$
$y = 6 - 2(11)$
$y = 6 - 22$
$y = -16$

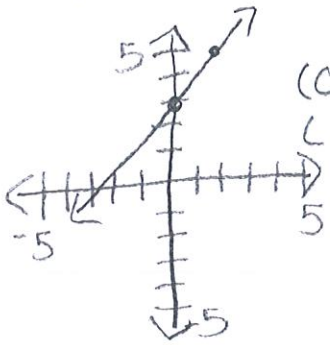
(5) $y = 4(x) + 5$
$y = 4(\frac{1}{2}) + 5$
$y = 2 + 5$
$y = 7$

(6)



(0, -10)
(1, -9) (3, -7)
(2, -8)

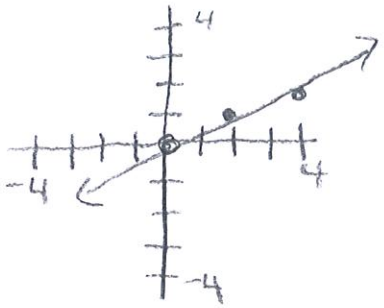
(7) $y = 2x + 3$



(0, 3)
(1, 5)
(2, 7)
(3, 9)

(8) $y = \frac{x}{2} \rightarrow y = \frac{1}{2}x$

slope = $\frac{1}{2}$ no y-int



(0, 0)
(2, 1)
(4, 2)
(6, 3)

(9) y-int = -4
Slope = $\frac{2}{1}$

$y = 2x - 4$

(10) Slope:
(-3, -3)
(0, -1)

$\frac{-1 - -3}{0 - -3} = \frac{-1+3}{0+3} = \frac{2}{3}$

y-int = -1

$y = \frac{2}{3}x - 1$

(11)

In	Out
3	11
4	85
6	480
10	

(12) Independent variable = # of songs
Dependent variable = total cost

$C = .90s$

or

a) $y = .90x$

b) $y = .90(x)$

$y = .90(5)$

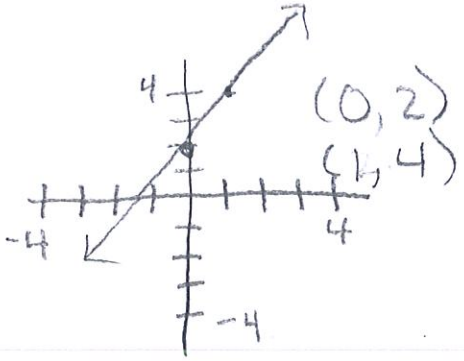
$y = \$4.50$

(13) slope

$(0,2)$ $(2,6)$ $\frac{6-2}{2-0} = \frac{4}{2} = 2$

y-int = 2

a) $y = 2x + 2$



b) $y = 2(x) + 2$

$y = 2(15{,}000{,}000) + 2$

$y = 32{,}000{,}000$ or $32 million

Pg. 261 (5-15, skip 10)

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

(6) $y = -4x - 2$

(7) $y = 3$

(8) Find slope

(-2, -4)
(-1, -2)

$\frac{-2--4}{-1--2} = \frac{-2+4}{-1+2} = \frac{2}{1} = 2$

(0,0) y-int = 0

$y = 2x$

(9) Find slope

(-8, 2) $\frac{1-2}{-4--8} = \frac{1-2}{-4+8} = \frac{-1}{4}$
(-4, 1)

(0,0) y-int is 0

$y = -\frac{1}{4}x$

(10) Find slope

(0,5) $\frac{7-5}{3-0} = \frac{2}{3}$
(3,7)

(0,5) y-int is 5 $y = \frac{2}{3}x + 5$

(11) A) ind = renting x movies

dep = cost of y movies

B) Find slope

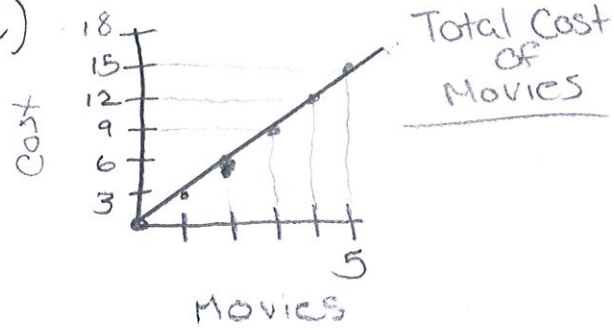
(0,0) $\frac{3-0}{1-0} = \frac{3}{1} = 3$
(1,3)

(0,0) y-int is 0

$y = 3x + 0$

It costs $3 to rent 1 movie

C)



D) $y = 3(x)$

$y = 3(3)$

$9

(12) a) Find slope

(19, 10.2)

(21, 9.8)

$$\frac{10.2 - 9.8}{19 - 21} = \frac{.4}{-2} = -.2$$

$y = -.2x + b$

$10.2 = -.2(19) + b$ (solve for y-int)

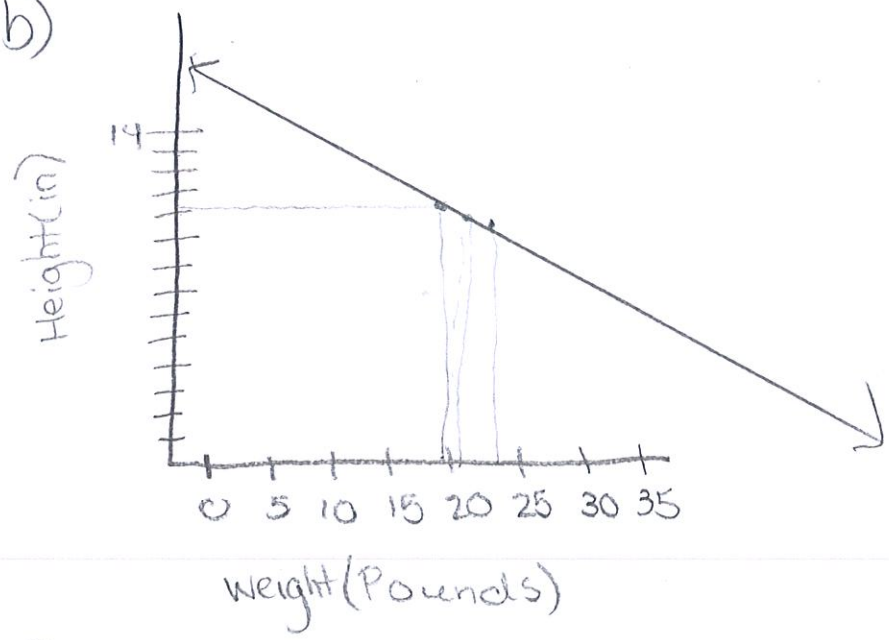
$10.2 = -3.8 + b$

$+3.8 \quad +3.8$

$14 = b$

$y = -.2x + 14$

b)



c)

$y = -.2(x) + 14$

$y = -.2(21.5) + 14$

$y = 9.7$ inches

(13) a) $y = -.2x + 1$

b)

y-int: you start w/ an hour of battery life

slope: you lose .2 hour every hour

x-int: you have no battery life @ 5 hours

c)

$.75 = -.2x + 1$

$-1 \quad -1$

$-.25 = -.2x$

$\frac{-.25}{-.2} = \frac{-.2x}{-.2}$

$x = 1.25$ hours

about 75 mins

(15) $y = 4.5x$ (kayak)

$y = 5x$ (hiking)

a) hiking

b) Kayak $y = 4.5(x)$

$y = 4.5(5)$

$y = 22.5$ cal

hiking $y = 5(x)$

$y = 5(5)$

$y = 25$ cal

So you burn 2.5 cal more by hiking