Lesson 1.1.2

1-13

a) 24 blocks ÷ 1 block per min = 24 mins

24 blocks ÷ 2 blocks per min = 12 mins

b)

speed (blocks per min)	1	2	3	4	6	8	10	12	24
time to friends house (mins)	24	12	8	6	4	3	2.4	2	1

1-15

a) 10 = 2 × 5, 2 + 5 = 7

b) 2 = −2 × −1, −2 + −1 = −3

c) 8 = 2 × 4, 2 + 4 = 6

d) 4 = 8 × ½, 8 + ½ = 8½

e) 12 = −4 × −3, −4 + −3 = −7

1-16

a) $x + 5 = 5$

$-5 \quad -5$

$\boxed{x = 0}$

b) $2x - 6 = 3x + 1 - x - 7$

$2x - 6 = 2x - 6$

$+6 \quad +6$

$\frac{2x}{2} = \frac{2x}{2}$

$\boxed{x = x}$

all values of x!

c) $3x + 1 = 43$

$-1 \quad -1$

$\frac{3x}{3} = \frac{42}{3}$

d) $4x - 1 = 4x + 7$

$+1 \quad +1$

$4x = 4x + 8$

$x = 14$

$0 = 8$
no solution

1-18

a) 12 gallons = \$16

b) \$12.60 ÷ \$1.50 = 8.4 gallons

c) still linear but steeper

1-20

a) $-2(-3)^2 - 3(-3) + 1$

$-2(9) - (-9) + 1$

$-18 + 9 + 1 = \boxed{-8}$

b) $8 - [3(-2) - 2]^2$

$8 - [-6 - 2]^2$

$8 - [-8]^2$

$8 - 64 = \boxed{-56}$

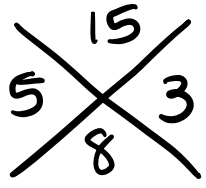
c) $\frac{-3}{(-3)+2} \rightarrow \frac{-3}{-1} = \boxed{3}$

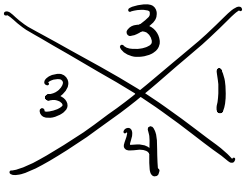
d) $\frac{15(1)}{(2)+1} - (1)^2 + (2)$

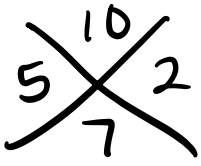
$\frac{15}{3} \rightarrow 5 - 1 + 2 = \boxed{6}$

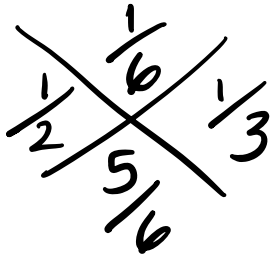
$\frac{}{3} = 1 + 2 = 3 = 1 + 2 =$ 0

1-21

a) 

b) 

c) 

d) 

1-22

a) Function A: $Y = (-9)^2 + 3$

$Y = 81 + 3$

$Y = 84$

Function B: $Y = \sqrt{(-9)} - 2$

↑ not allowed so no solution

b) We want an output of 0, so $Y = 0$

Function A: $\underset{-3}{0} = x^2 \underset{-3}{+ 3}$

$\sqrt{-3} = \sqrt{x^2}$

↑ cannot sq. rt. negative #s

Function B: $\underset{-2}{0} = \sqrt{x} \underset{-2}{- 2}$

$(-2)^2 = (\sqrt{x})^2$

$4 = x$

Eric can get an output of 0 if he

plugs in 4 for x.