Station #1

1. (2,18) and (8,36)

$\frac{36-18}{8-2} = \frac{18}{6} = \frac{3 \text{ lbs}}{1 \text{ month}}$

3 lbs / 1 month

2. $f(a+3) = 5(a+3) - 8$

$= 5a + 15 - 8$

$= 5a + 7$

$f(a+3) = 5a+7$

3. (8,10) and (-3,10)

$\frac{10-10}{-3-8} = \frac{0}{-11}$

zero

4. $\parallel m = 2$ $\quad$ $5 = 2(10) + b$

(10,5) $\quad$ $5 = 20 + b$

$b = ?$ $\quad$ $b = -15$

$y = 2x - 15$

Station #2:

1. x-int: $(-3,0)$ $\quad m = \frac{5-0}{0+3} = \frac{5}{3}$ $\quad \boxed{y = \frac{5}{3}x + 5}$

   y-int: $(0,5)$

   $b = 5$

   $m = 5/3$

2. $y - 4 = \frac{1}{2}(x+3)$

   $2\left[y - 4 = \frac{1}{2}x + \frac{3}{2}\right]2$

   $2y - 8 = 1x + 3$

   $2y = 1x + 11$

   $-1x + 2y = 11$ or

   $\boxed{\begin{array}{c} -1x + 2y = 11 \\ \text{or} \\ 1x - 2y = -11 \end{array}}$

3. $\perp m = 1/2$ $\quad 0 = \frac{1}{2}(4) + b$ $\quad \boxed{y = \frac{1}{2}x - 2}$

   x-int: $(4,0)$ $\quad 0 = 2 + b$

   $b = -2$

4. $2x = 4y + 8$

   $2x = 4y + 8$

   $2x - 4y = 8$

   $\boxed{\begin{array}{l} \text{x-int: } (4,0) \\ \text{y-int: } (0,-2) \end{array}}$

Station #3:

1. $f(-2) = -(-2)^2 + 6(-2)$

$= -(4) - 12$

$= -4 - 12$

$= -16$

$f(-2) = -16$

2. $f(x) = -2x + 10$ $\quad$ $g(x) = 5x + 14$

y-int: 10 $\quad$ y-int: 14

$g(x) - f(x)$

$14 - 10 = 4$

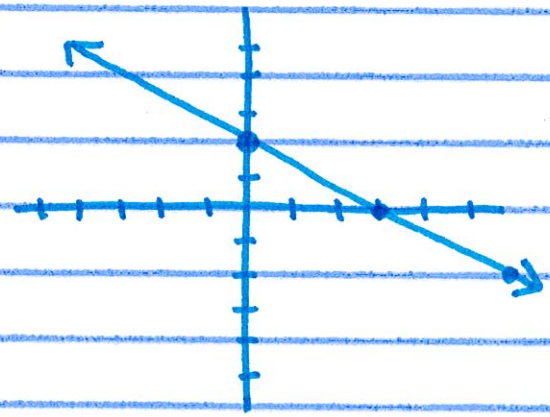
Difference is 4.

3. (6, 8) and (6, -6)

$\frac{-6-8}{6-6} = \frac{-14}{0}$

undefined

4.



slope: -2/3

y-int: 2

Station #4:

1. a) Domain: $\{-3, -2, 2, 3\}$
   b) Range: $\{0, 4\}$
   c) yes b/c the domain does not repeat.

2. $x + 3y = 6$
   $3y = -1x + 6$
   $y = -\frac{1}{3}x + 2$

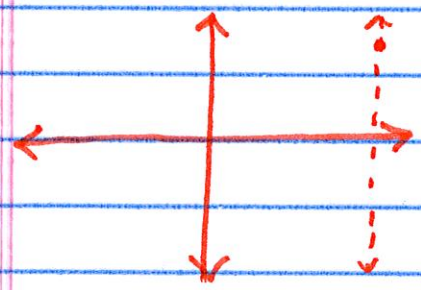
   // $m = -\frac{1}{3}$
   $(-1, 2)$
   $b = ?$

   $2 = -1/3(-1) + b$
   $2 = 1/3 + b$
   $b = 5/3$

   $$y = -\frac{1}{3}x + \frac{5}{3}$$

3. $5x + 3y = 15$
   $3y = -5x + 15$
   $y = -\frac{5}{3}x + 5$

   $\perp m = 3/5$

4. 

   $x = 10$