1. (a) $f(4) = 1.5$
   (b) $f(8) = 1.5$

2. (a) $x = 1, x = 1.5, x = 4.5, \text{ and } x = 7$
   (b) $m = \frac{2 - 1}{7 - 3} = \frac{1}{4} = 0.25$

3. (a) $y = 3.75x - 241 \text{ or } y - 299 = 3.75(x - 144)$
   (b) slope $= \frac{-7}{3}$
       horizontal intercept $= 30$

4. (a) $y = 5.4667x - 206.1333$
   (b) 187.4691 pounds (if you use the rounded formula is part a) or 187.4667 pounds (if you use the formula that is not rounded.)

5. $f(x)$ concave up
   $g(x)$ is linear
   $h(x)$ is concave down

6. (a) vertical intercept is 2000. this is the starting balance of the account
   (b) $\frac{4000 - 2000}{4 - 0} = 500$ dollars per year
   (c) during the first four years, the balance of the account grew on average by $500 each year.