

Alg.  
2nd & 4th wks  
Review

$$1) f(x) = 2x^2 - 2$$

$$f(3) = 2(3)^2 - 2$$

$$2 \cdot 9 - 2$$

$$18 - 2$$

$$\boxed{16}$$

$$2) (-1, 0)$$

$$(0, 2)$$

$$m = \frac{2-0}{0-(-1)}$$

$$m = \frac{2}{1}$$

$$\boxed{m = 2}$$

$$3) \frac{85 + 99 + 77 + x}{4} = 90$$

$$4) \frac{261 + x}{4} = 90 \quad (4)$$

$$\frac{261 + x}{4} = 90$$

$$\frac{261 + x - 261}{-261} = \frac{360 - 261}{-261}$$

$$\boxed{x = 99}$$

$$4) \frac{x-8}{5x} = \frac{2}{4}$$

$$4x - 32 = 10x$$

$$\frac{-4x}{-4x} \quad \frac{-32}{-4x}$$

$$\frac{-32}{6} = \frac{6x}{6}$$

$$\boxed{-\frac{16}{3} = x}$$

$$5) \frac{7}{5} = \frac{6}{x}$$

$$\frac{7x}{7} = \frac{30}{7}$$

$$\boxed{x = \frac{30}{7}}$$

$$6) \frac{2}{10} + \frac{5}{10} = \frac{7}{10} \text{ chose Snickers, mom's}$$

$$\text{so, } \frac{3}{10} \text{ did not}$$

$$7) \frac{13 + 24 + x}{3} = 15$$

$$8) \frac{37 + x}{3} = 15 \quad (3)$$

$$37 + x = 45$$

$$\frac{-37}{-37} \quad \frac{-37}{-37}$$

$$\boxed{x = 8}$$

8)  $f(3)$  means  
find value on  
line when  $x$  is 3

$$(3, -3)$$

$$\text{so, } \boxed{-3}$$

$$9) E = 10c - 10$$

$$0 = 10c - 10$$

$$\frac{+10}{+10} \quad \frac{+10}{+10}$$

$$\frac{10}{10} = \frac{10c}{10}$$

$$\boxed{1 = c}$$

10) find when  $x = 1$   
 $(1, -4)$

$$\text{so, } \boxed{-4}$$

11) study  
explanation  
on practice  
test

$$12) \{ (1, 3), (-4, 0), (3, 1), (0, 4), (2, 3) \}$$

$$\text{Range} = \{ 0, 1, 3, 4 \}$$

$$\text{Domain} = \{ -4, 0, 1, 2, 3 \}$$

13) Domain 1990-2007

Range 60-90

14) yes, no

(use vertical line test)

15) no, yes  
(use vertical  
line test)

x	y
-4	9
2	-3
5	-9
9	-17

$$m = \frac{\text{change in } y}{\text{change in } x}$$

$$\frac{-12}{6} = -2$$

$$\frac{-6}{3} = -2$$

$$\frac{-8}{4} = -2$$

$$\text{so, } \boxed{m = -2}$$

17)

x	y
-1	4
3	6
5	7
11	10

+4 ↘ (-1) ↗ +2  
+2 ↘ (3) ↗ +1  
+6 ↘ (5) ↗ +3

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

$$\frac{1}{2}$$

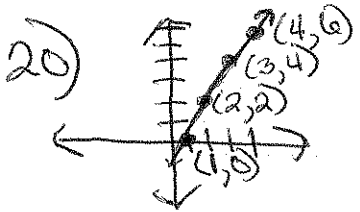
$$\frac{3}{6} = \frac{1}{2}$$

so,  $m = \frac{1}{2}$

18)  $(-2, 5)$   
 $(3, 8)$

$$\frac{8-5}{3-(-2)} = \frac{3}{5}$$

A)  $3 \cdot 20 + 10(3 \cdot 20)$   
 $60 + 10(60)$   
 $60 + 600$   
 $660$

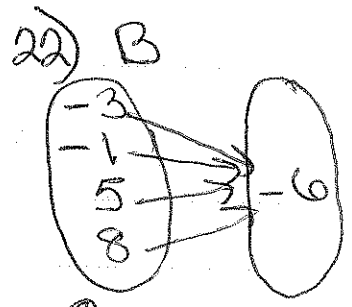


Start at (3, 4)  
 $m = \frac{2}{1}$  (rise)  
1 (run)

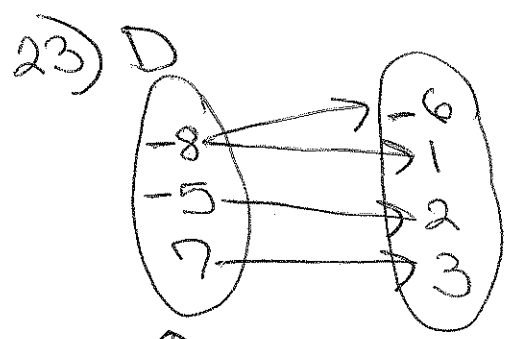
21) orig = 110, 117, 120, 130, 140, 140, 170, 225, 230  
median  
mode = 140

new = 105, 110, 117, 120, 130, 140, 170, 225, 230  
median  
no mode

change 140 to 105  
average (mean) goes down  $\textcircled{B}$



each number in domain paired with one number in range



-8 is paired with more than one number in range