1. Fill in the table then write an equation that describes the function shown by the table.

Input, x	-4	0	4	8		100	0.5
Output, y	17		-15	-31	21		

2. The table shows the number of cupcakes remaining in the bakery case throughout the day.

Hours x	Number of cupcakes, <i>y</i>
1	75
4	63
7	51
10	39

- a. Write an equation that relates the number of cupcakes to the hours that the bakery is open.
- **b.** How many cupcakes are in the case after 9 hours?

Create 2 mapping diagrams – one that is a function and one that is not. List the ordered pairs.

3. Input Output 4. Input Output

5. Sue is saving money to buy a laptop. She has \$45 in the bank and is saving \$15 each week.

a. Write the rule for this situation ______

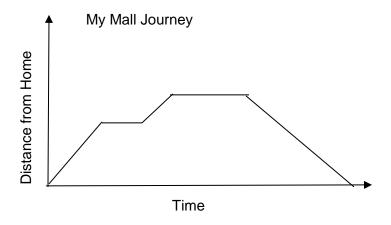
b. Graph using appropriate scale and label axes

c. Interpret the slope in the context of this problem:

d. Interpret the y-intercept in the context of this problem:

e. if the laptop is \$450 when will she have enough money to buy it?

6. Write a complete story for the graph.



7. Solve:

a.
$$4x - 9 = 7x + 12$$

a.
$$4x - 9 = 7x + 12$$
 b. $\frac{1}{2}(4x - 8) = -20$ c. $2x + 6 + x = 3(x + 2)$

c.
$$2x + 6 + x = 3(x + 2)$$

Find the value of y for the given value of x.

8.
$$y = -\frac{1}{2}x + 9$$
 for $x = 16$

9.
$$y = 12x - 100$$
 for $x = 8$

10. Graph the equations:

$$y = \frac{1}{3}x - 4$$

$$y = -4x + 7$$

Slope: _____

y-intercept: _____

b = _____

6 Rev C (8CP)

