Linear Relationships – Day 5
Assignment
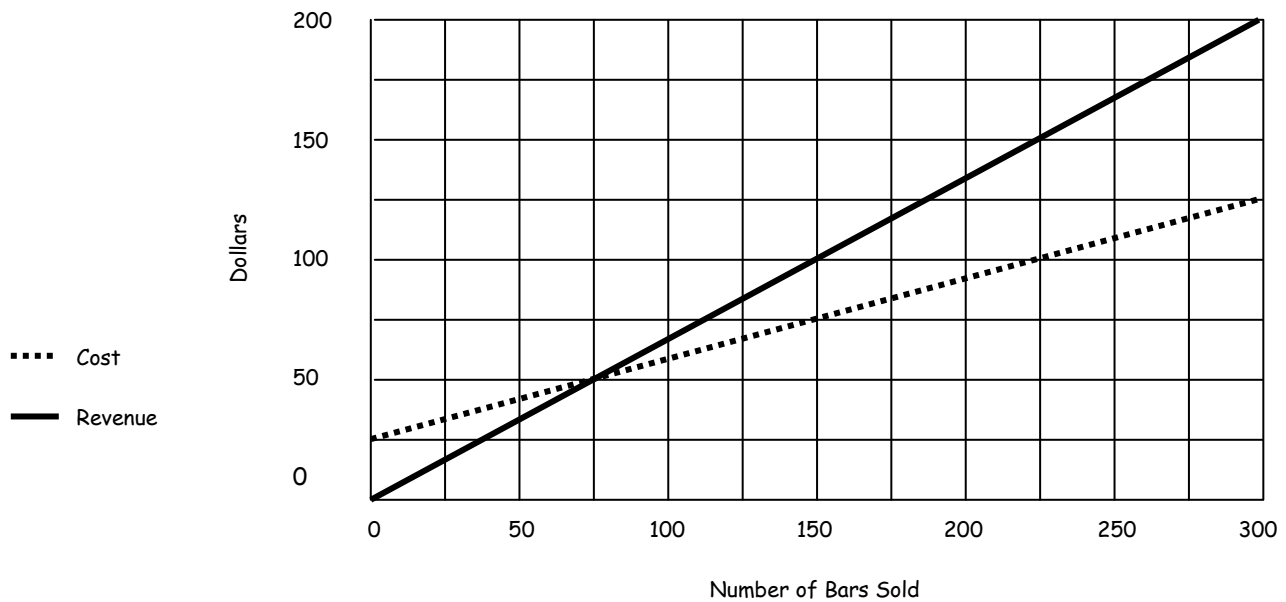
Name _____
Date _____ Period _____

Identify the m and b in each linear equation.

1.   y = 4x - 5   m = _____   b = _____
2.   y = 9 + x   m = _____   b = _____
3.   y = 8   m = _____   b = _____
4.   y = 18x   m = _____   b = _____
5.   y = -3x - 7   m = _____   b = _____
6.   y = 2 – 6x   m = _____   b = _____

The school band decides to sell chocolate bars to raise money for an upcoming trip. The cost and the revenue of selling the candy bars are represented on the graph below.

Candy Bar Sales

7.   Identify the y-intercept, the rate, and the equation for the Revenue.

8.   What would be the revenue from selling 50 candy bars?

9.   What would the revenue be from selling 125 candy bars?

10.   How many candy bars must the band sell for the revenue to be $200? How much of this revenue would be profit?

The new movie theater opened in Regal's neighborhood. The theater offers a yearly membership for which customers pay a fee of $50, after which they pay only $1 per movie. Nonmembers pay $4.50 per movie. Regal is trying to figure out whether to buy a membership. She writes these cost equations.

$$C_M = 50 + n \qquad\qquad C_N = 4.5n$$

Where n is the number of movies seen in one year, C_M is the yearly cost in dollars for a member, and C_N is the yearly cost in dollars for a nonmember.

11.   If Regal sees ten movies this year, what would be her cost under each plan?

12.   Complete the table below and then draw a graph from the data. Use a different color
        for each line.

# of Movies	Member Cost	Nonmember Cost
0		
2		
4		
6		
8		
10		
12		
14		
16		
18		
20		
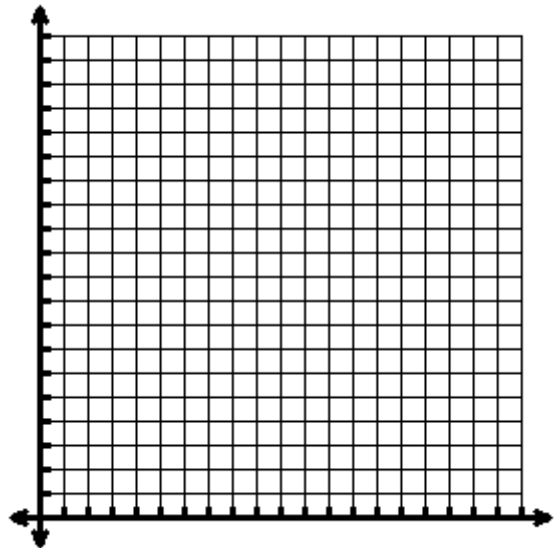
13.   How many movies must Regal see this year to make the yearly membership a better deal?

14.   What does the y-intercept in each equation tell you about this situation?

15.   What does the coefficient of n in each equation tell you about the situation?