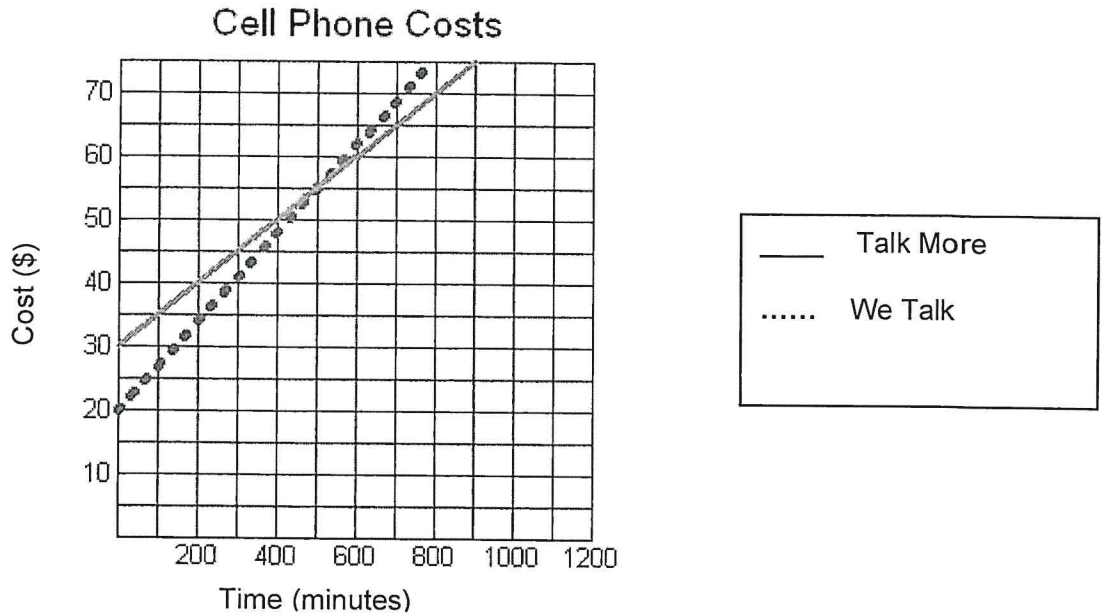


# Practice: Linear Systems | MFM1P

**Question#1.** Two cell phone companies charge a monthly flat fee plus an additional cost for each minute of time used. The graph below shows the Time vs. Cost relationship, for one month.



1. What is the Point of Intersection (POI)? \_\_\_\_\_

What is the meaning of the POI in relation to the cell phone plans?

2. Complete the following statements:

a) It would be best to choose the **Talk More** cell phone plan if \_\_\_\_\_  
 \_\_\_\_\_

b) It would be best to choose the **We Talk** cell phone plan if \_\_\_\_\_  
 \_\_\_\_\_

c) It would not matter which plan I chose if \_\_\_\_\_  
 \_\_\_\_\_

3. For the **Talk More** cell phone plan:

a) what is the initial value? \_\_\_\_\_ b) what is the rate of change? \_\_\_\_\_

c) what would the equation be if **C** represents the cost and **h** represents the number of minutes? \_\_\_\_\_

**Question#2.** **KC Fitness Club** charges a flat fee of \$25 per month plus \$5 per visit.  
**Workout Zone** charges a flat fee of \$35 per month plus \$3 per visit.

- a) Write an equation to represent each fitness club where **C** is cost and **n** is the number of visits.

KC Fitness Club \_\_\_\_\_ Workout Zone \_\_\_\_\_

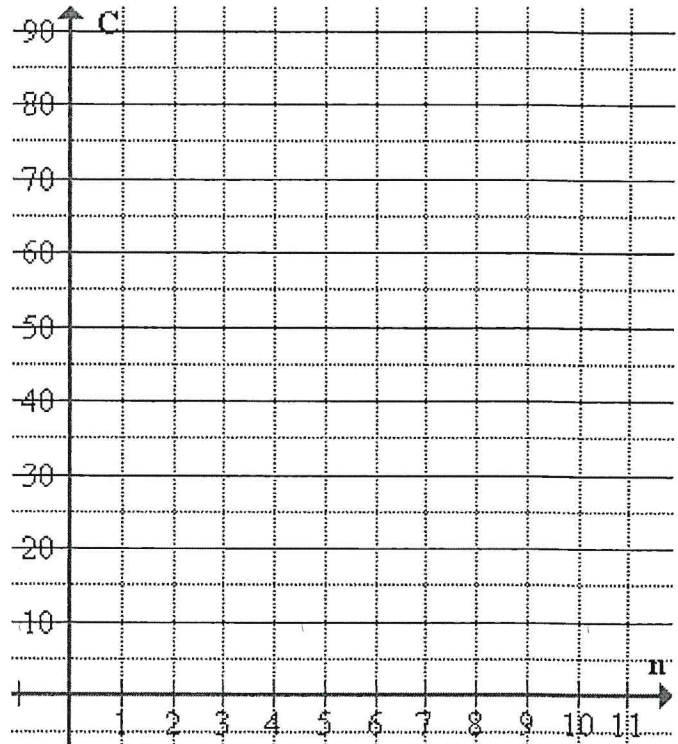
- b) Complete the table of values for each club. Graph the data. Label fully.

KC Fitness Club

<i>n</i>	<i>C</i>
0	
2	
4	
6	
8	
10	

Workout Zone

<i>n</i>	<i>C</i>
0	
2	
4	
6	
8	
10	



- c) (i) What is the point of intersection (POI)? \_\_\_\_\_  
(ii) What does the POI mean in the context of this scenerio?
- d) If you knew that you could only visit the gym 10 times, which club should you join and how much would you save each month?
- e) If you knew that you could only visit the gym 3 times, which club should you join and how much would you save each month?