

Name: \_\_\_\_\_

# Lesson FI: Supplement



Class: \_\_\_\_\_

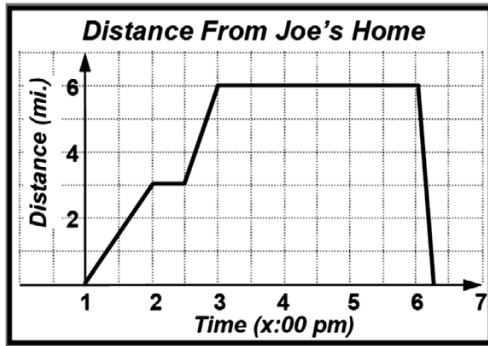
ⓧ *Note: Give this supplement when the exercise below is about to begin.* ⓧ

## FL-1

Joe is going to Vinny's house on foot. On the way he meets Charlie and talks. He arrives and then gets a ride home.

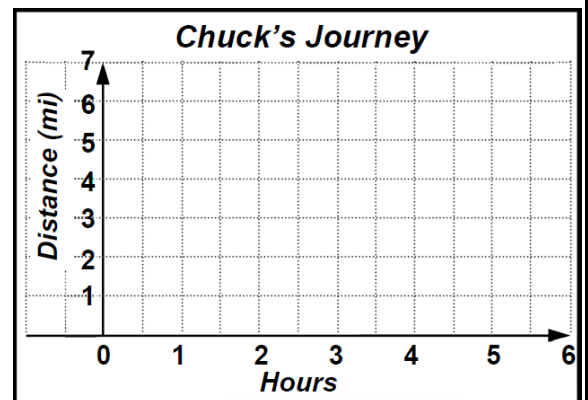
### Questions

1. When does he meet Charlie? How long do they talk?
2. How fast is he walking before and after he meets Charlie?
3. When does he get to Vinny's?
4. When does he leave? Get home?
5. How fast was his ride?



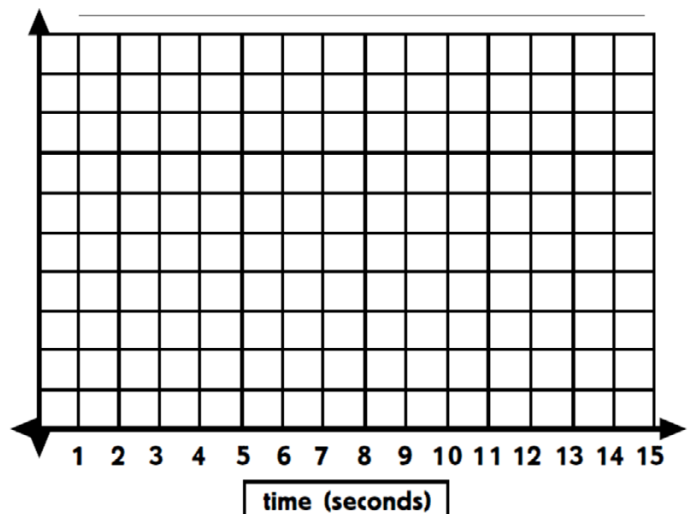
Graph Chuck's journey to the home base using the given information.

1. Chuck leaves the jungle, 7 miles from his base, at 0-hour.
2. He travels 1 mile in 1 hour and stops to hide and eat for 90 min.
3. He sees an opening and moves 2 miles in the next hour, but then sees he is being pursued.
4. Chuck was forced to go back 1 mile, in 30 minutes, and then he stopped to hide again for another 30 minutes.
5. Finally he ran home in the next hour.



Graphing Elevation vs. Time (guy on the steps)

Notes:

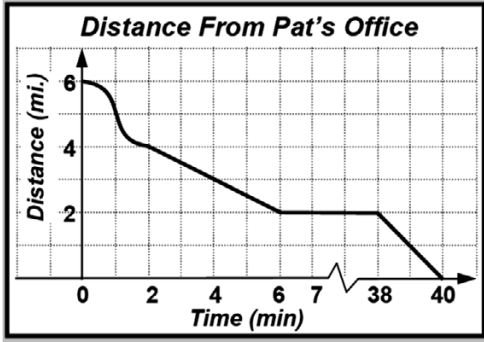


Extra Material (if time permits)

Pat (or Ann) is driving home from work. She takes a variety of roads and makes a stop at a store.

Question

Describe the ride, justify all changes.

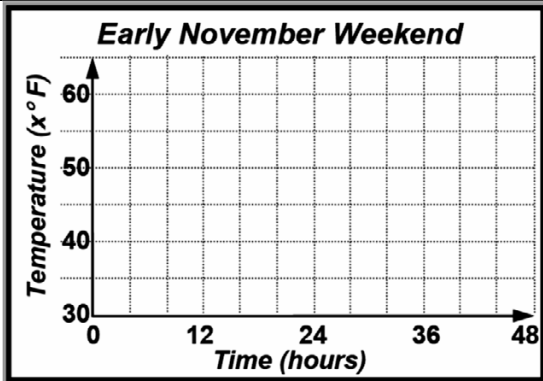


Graph the Events

12:00 AM (0 hrs): 45°

Temperature Saturday reached a high of 62° at 2pm. The low temperature of the weekend was at 4am Sunday, 35°. Sunday's high was 55°.

12:00 AM (48 hrs): 40°.

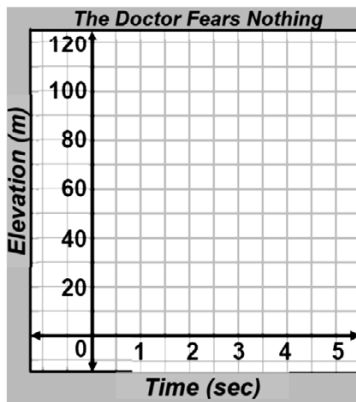


**FL-2**

The Doctor cliff dives on every third Wednesday. Elevation (x) vs. Time (y)

x	y
0	120.0
1	115.1
2	100.4
3	75.9
4	41.6
5	-2.5

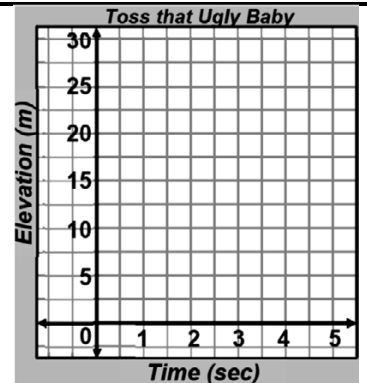
Note: Gravitational acceleration on Earth is  $-9.8 \text{ m/s}^2$ .



Odd Baby Toss to the Sky Elevation (x) vs. Time (y)  $g = -9.8 \text{ m/s}^2$  and  $v_0 = 24.5 \text{ m/s}$

x	y
0	0
1	19.6
2	29.4
2.5	30.6
3	29.4
4	19.6
5	0

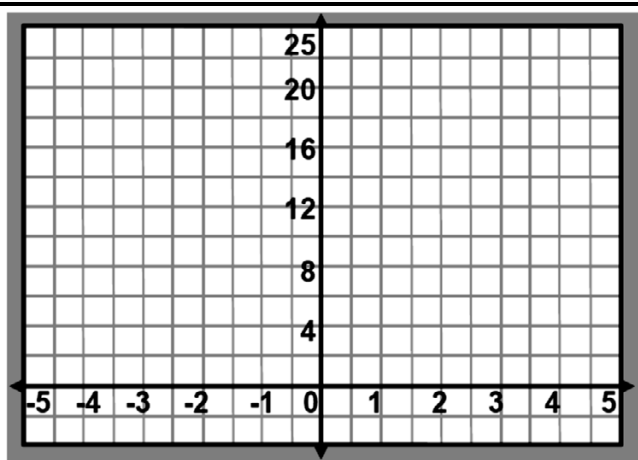
Are the curves actual paths?



Graph: Measuring a Square Side Length (x) vs. Area (y)

x	y
0	
1	
2	
3	
4	
5	

Reflect the graph in the y-axis. What shape is the graph?

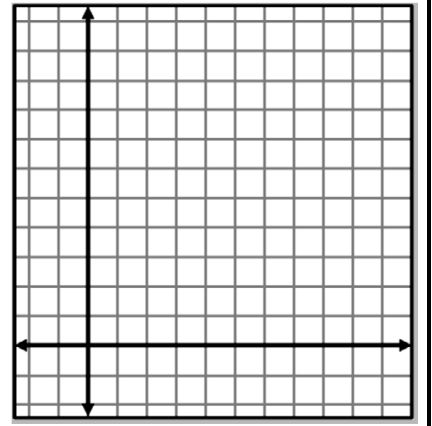


**FL-3**

Plot the data below onto the graph. Choose appropriate scales for x and y.

- Describe the curve.
- Compare it to linear and quadratic models.
- Will it ever be “vertical”?

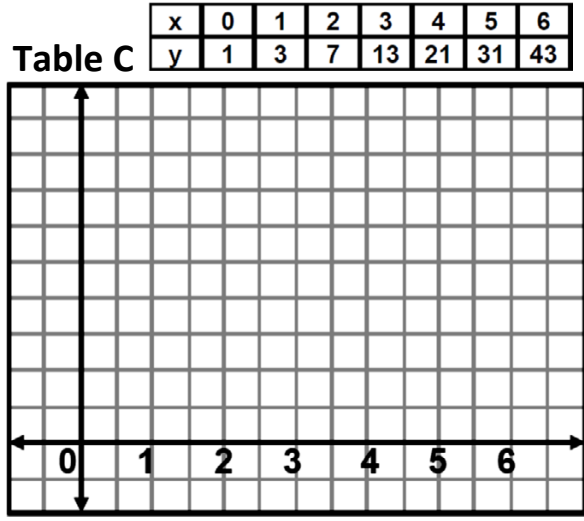
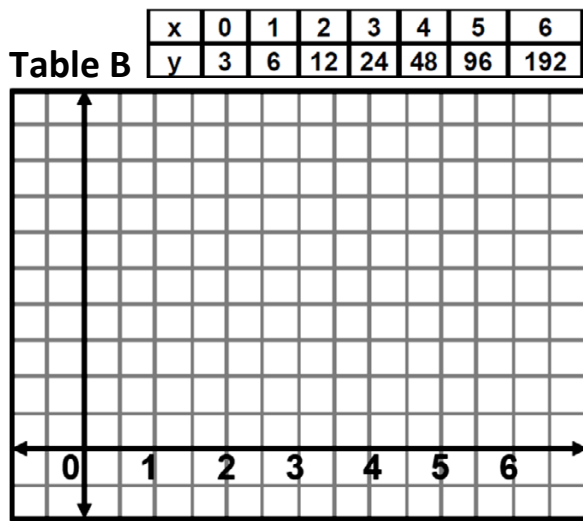
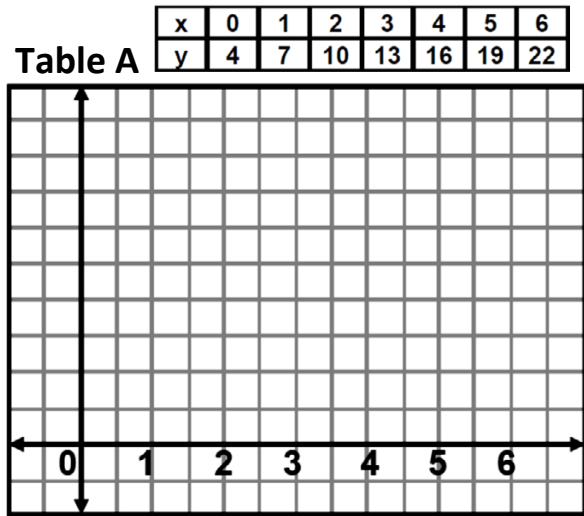
x	y
0	2
1	4
2	8
3	16



Assume a bacteria population doubles every hour.

Graph the data from each table, choose the right scale for y.

1. Which graph is the bacteria?
2. What function models are the others?



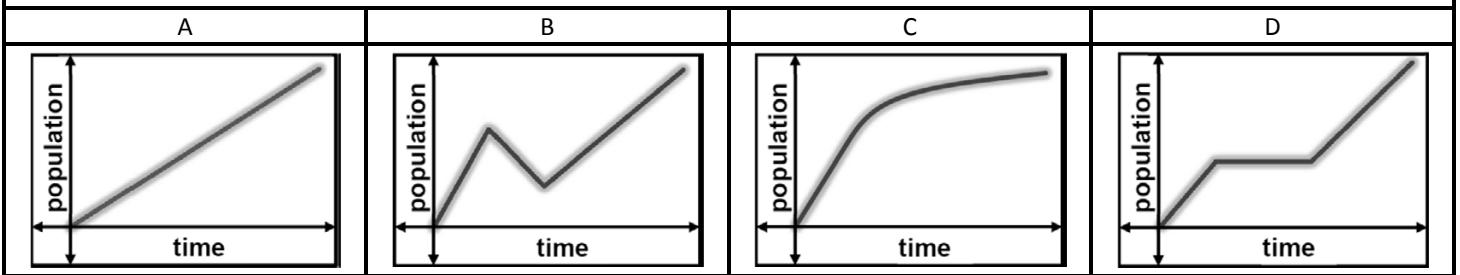
Below is a description of the graph of the population of a city over a period of time. Match the description to the graph. Write a "story" explaining the change. For the other three graphs, describe them and write a short "story" for each.

Graph \_\_\_\_: Population size grows at a constant rate, then doesn't change for a while, and then grows at a constant rate again. What could make this happen?

Graph \_\_\_\_:

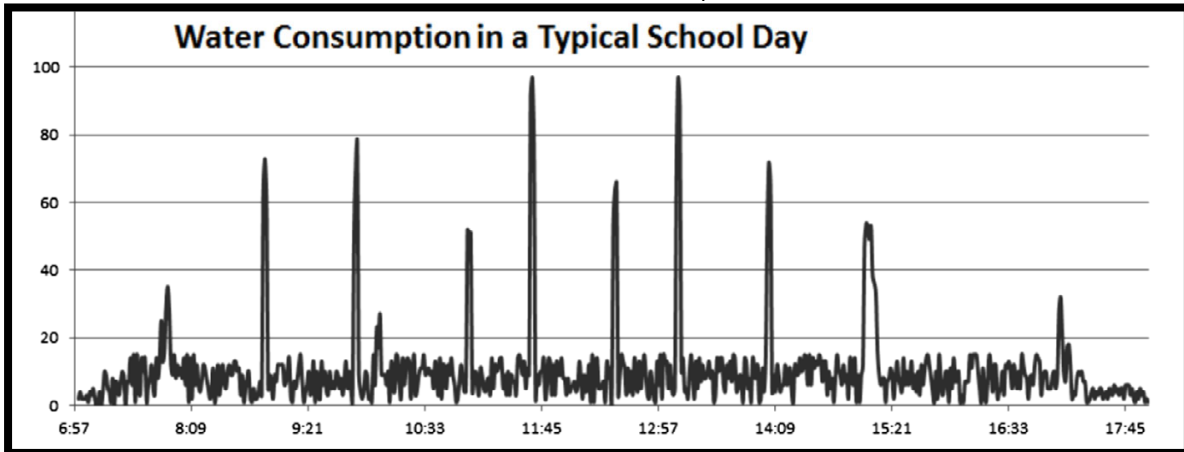
Graph \_\_\_\_:

Graph \_\_\_\_:

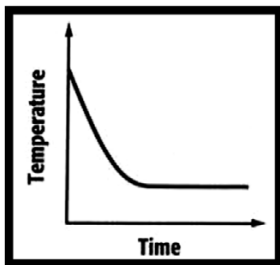


**FL-4**

Use this for two sections of questions.



Temp of a Cup of Hot Chocolate



Describe the change on the graph

Walking the Dog



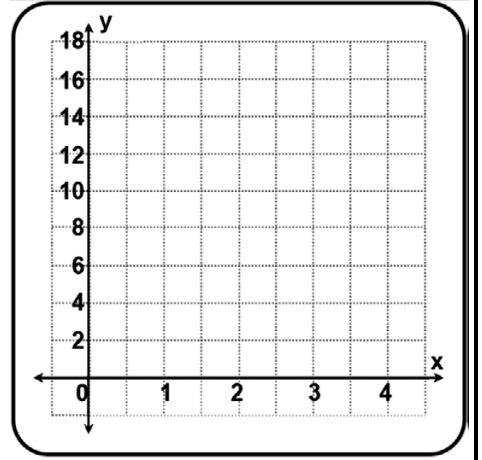
Describe the change on the graph

## FL-5

Two fertilizers are being tested.

- Plant A is 4 cm tall and grows at a rate of 4 cm/day.
- Plant B is 10 cm tall and grows at 2 cm/day.

1. Graph the lines.
2. Find their intersection. ( , )
3. What does the point signify?
  
4. Which fertilizer is better?

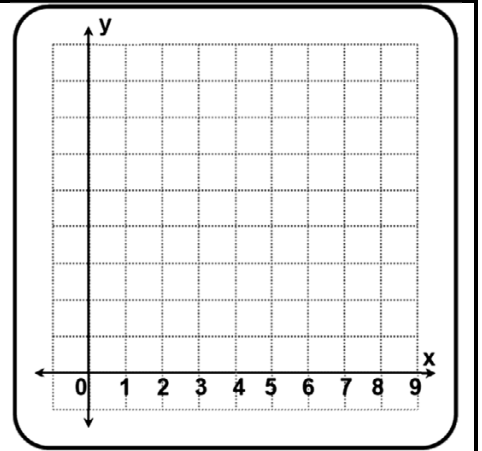


Two football players start at opposite ends of the field, each 10 yds. from the goal line.

- They run at each other at equal rates of 10 yds. / sec.

Graph this situation.

1. Where and when do they meet?
  
2. Compare the slopes of the lines.



Two football players start at opposite ends of the field, each 10 yds. from the goal line.

- Bo runs at 30 yds / 2 sec.
- Marcus runs at 10 / 2 sec.

Graph this situation.

1. Where and when do they meet?
  
2. Compare the slopes of the lines.

