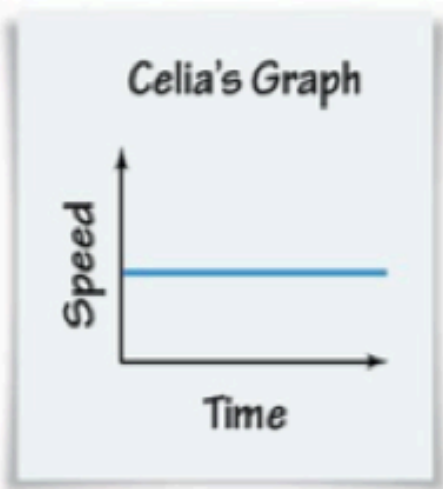


Problem 1.4  
Homework  
Due Wednesday, March 6th

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

12. Celia uses (*time, distance*) data from one part of the bike tour test run to draw the following graph relating time and speed. Celia forgot to include scales on the axes of the graph.



a. What does this graph show?

- b. Is the graph most likely a picture of speed for a cyclist, the tour van, or the wind over a part of one day's trip? Explain your reasoning about each possibility.

**Labsheet 1ACE****Exercise 13**

13. The following table shows (*time, distance*) data from the bike tour group's van ride home from Williamsburg to Atlantic City.

**Williamsburg to Atlantic City Van Ride**

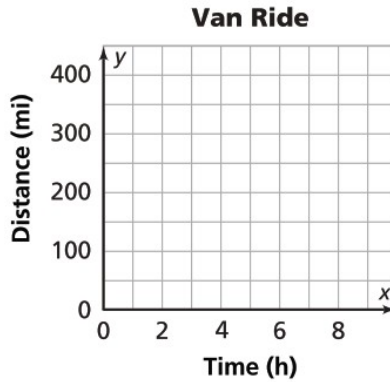
<b>Time (h)</b>	0	1	2	3	4	5	6	7	8
<b>Distance (mi)</b>	0	50	110	150	200	220	280	315	345

- a. What was their average speed for the whole trip?
- b. What was their average speed for the first four hours of the trip?
- c. What was their average speed for the second four hours of the trip?

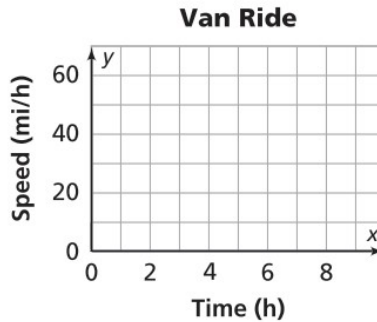
# Labsheet 1ACE

## Exercise 13

- d. Suppose that for the first four hours of the trip the van had traveled at a steady rate equal to the average speed calculated in part (b), and for the second four hours of the trip the van traveled at a steady rate equal to the average speed calculated in part (c).
1. Sketch the *(time, distance)* graph that would result from this pattern of driving.



2. Sketch the *(time, speed)* graph that would result from this pattern of driving.



# Labsheet 1ACE

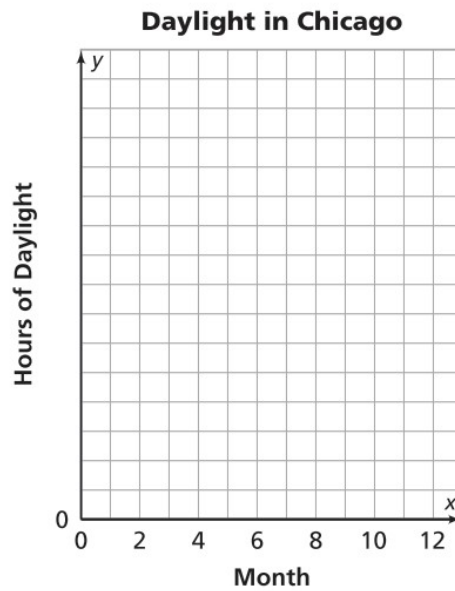
## Exercise 22

22. The number of hours of daylight in a day changes throughout the year. We say that the days are "shorter" in winter and "longer" in summer. The table shows the number of daylight hours in Chicago, Illinois, on a typical day during each month of the year. (January is month 1, and so on.)

**Daylight Hours**

Month	Number of Hours
1	10.0
2	10.2
3	11.7
4	13.1
5	14.3
6	15.0
7	14.5
8	13.8
9	12.5
10	11.0
11	10.5
12	10.0

- Describe any relationships you see between the two variables.
- On the grid below, sketch a coordinate graph of the data. Put months on the x-axis and daylight hours on the y-axis.



What patterns do you see?