Homework #21

Due Friday, March 6

Name_____

Buckley or Gietzen

1. Students want to sell T-shirts to raise funds for a class trip. They ask their classmates how much they would pay for a shirt and recorded the data in a table.

Projected Shirt Sales

Price per Shirt	$5	$10	$15	$20	$25
Number of Shirt Sales	50	40	30	20	10

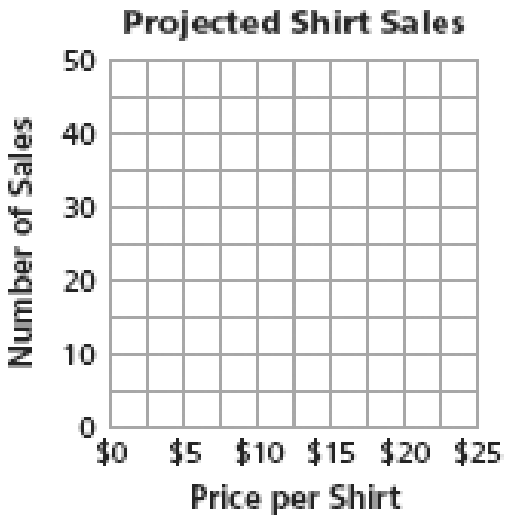
a. Describe the relationship between the **price per shirt** and the expected **number of shirt sales**.

b. **Complete the table** below to show the relationship between price per shirt and the expected total revenue of the shirt sales.

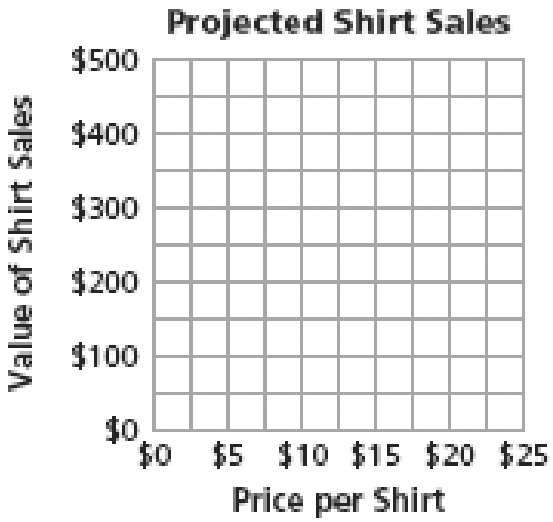
Projected Shirt Sales Value

Price per Shirt	$5	$10	$15	$20	$25
Number of Shirts Sold	50	40	30	20	10
Revenue of Shirt Sales	$250	$400			

c. Using the data from **part a**, fill in the coordinate graph below:



d. Using the data from **part b**, fill in the coordinate graph below:



2. When the *Ocean Bike Tour* operators considered leasing a small bus for the summer season, they checked prices from two companies.

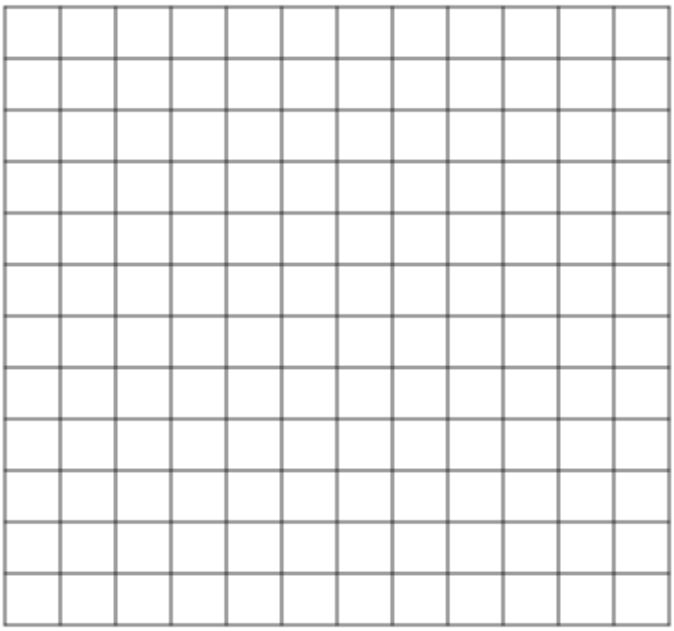
a. East Coast Transport (ECT) would charge a one-time up front $1,000 fee, plus $2 per mile that their bus would be driven. Fill in the table showing the cost of leasing from **ECT** for 100, 200, 300, 400, 500, 600, 700, and 800 miles of driving.

Miles	100	200	300	400	500	600	700	800
Cost	$1200	$1400						$2600

b. Superior Buses would charge only $5 per mile that their bus would be driven. Make a table showing the cost of leasing from **Superior Buses** for 100, 200, 300, 400, 500, 600, 700, and 800 miles of driving.

Miles	100	200	300	400	500	600	700	800
Cost	$500	$1000						$4000

c. On the coordinate grid below, plot the information from above for **both** bus-leasing companies. Use ***different colors*** to mark each company's plan.

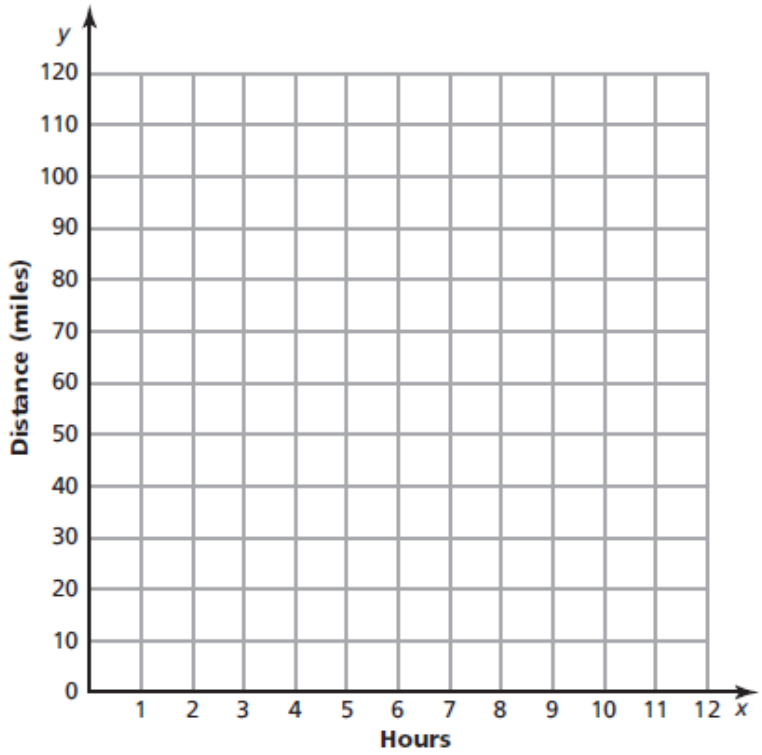


d. Based on your work in parts (a)–(c), which lease option seems best?

3. Carl rides his bike in a 12-hour cross-country race. The chart shows the total distance he rides by each hour mark.

Hours	0	1	2	3	4	5	6	7	8	9	10	11	12
Distance (miles)	0	14	26	35	47	51	57	64	77	85	94	101	116

a. Plot points on the coordinate grid to show the data from the chart.



Circle the intervals below that make each statement true.

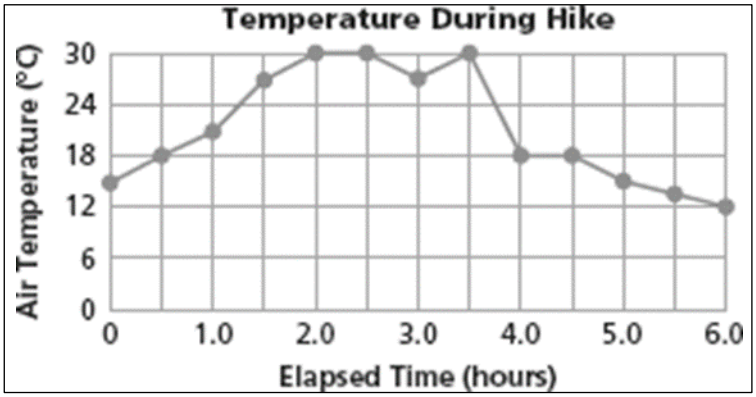
b. Carl's **fastest** average speed is between hours

- 0 and 1
- 3 and 4
- 4 and 5
- 10 and 11
- 11 and 12

c. Carl's **slowest** average speed is between hours

- 0 and 1
- 4 and 5
- 5 and 6
- 10 and 11
- 11 and 12

4. The graph below shows how the temperature changed during an all-day hike by students in the Terrapin Middle School science club.



a. What was the **lowest temperature** and **when** did it occur?

b. Between which half-hour period was the temperature **rising** most rapidly?

c. Between which half-hour period was the temperature **falling** most rapidly?

5. Connect the points (in order) to form a shape in the graph below:

(0, 8) (3, 4) (7, 4) (3, 1) (4, -5) (0, 0) (-4, -5) (-3, 1) (-7, 4) (-3, 4) (0, 8)