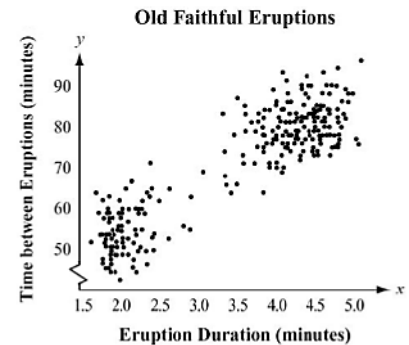


Name: _____

Block: _____

1. Barbara is considering visiting Yellowstone National Park. She has heard about Old Faithful, the geyser, and she wants to make sure she sees it erupt. At one time, it erupted just about every hour. That is not the case today. The time between eruptions varies. Barbara went on the Web and found a scatter plot of how long an eruption lasted compared to the wait time between eruptions. She learned that, in general, the longer the wait time, the longer the eruption lasts. The eruptions take place anywhere from 45 minutes to 125 minutes apart. They currently average 90 minutes apart.

- a. For an eruption that lasts 4 minutes, about how long would the wait time be for the next eruption?
- b. What is the shortest duration time for an eruption?
- c. Determine whether the scatter plot has a positive or a negative correlation and explain how you know.



2. A fast-food restaurant wants to determine whether the season of the year affects the choice of soft-drink size purchased. It surveyed 278 customers, and the table below shows its results. The drink sizes were small, medium, large, and jumbo. The seasons of the year were spring, summer, and fall. In the body of the table, the cells list the number of customers who fit both row and column titles. On the bottom and in the right margin are the totals.

- a. In which season did the most customers prefer jumbo drinks?
- b. What percentage of those surveyed purchased small drinks?
- c. What percentage of those surveyed purchased medium drinks in the summer?
- d. What do you think the fast-food restaurant learned from its survey?

	Spring	Summer	Fall	TOTALS
Small	24	22	18	64
Medium	23	28	19	70
Large	18	27	29	74
Jumbo	16	21	33	70
TOTALS	81	98	99	278

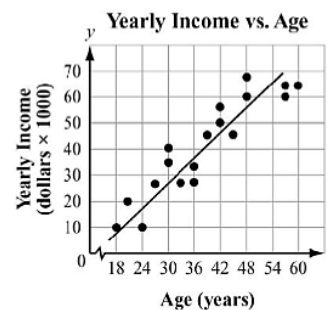
3. The environment club is interested in the relationship between the number of canned beverages sold in the cafeteria and the number of cans that are recycled. The data they collected are listed in this chart.

Beverage Can Recycling

Number of Canned Beverages Sold	18	15	19	8	10	13	9	14
Number of Cans Recycled	8	6	10	6	3	7	5	4

Find an equation of a line of best fit for the data.

4. This scatter plot suggests a relationship between the variables age and income.



- a. What type of a relationship is suggested by the scatter plot (positive/negative, weak/strong)?
- b. What is the domain of ages considered by the researchers?
- c. What is the range of incomes?
- d. Do you think age causes income level to increase? Why or why not?

5. Mr. Storer, the physical education teacher, measured and rounded, to the nearest whole inch, the height of each student in his first-period class. He organized his data in this chart.

Height (Inches)	Frequency
42	1
43	2
44	4
45	5
46	4
47	2
48	1

a. Make a dot plot for the data.

b. Make a histogram for the data.

c. Make a box plot for the data.

GSE Algebra 1

Unit 6 – Describing Data

EOC Review

1. A school was having a coat drive for a local shelter . A teacher determined the median number of coats collected per class and the interquartile range of the number of coats collected per class for the freshmen and for the sophomores .

- The freshmen collected a median number of coats per class of 10, and the interquartile range was 6 .
- The sophomores collected a median number of coats per class of 10, and the interquartile range was 4 .

Which range of numbers includes the third quartile of coats collected for both freshmen and sophomore classes?

- A . 4 to 14
- B . 6 to 14
- C . 10 to 16
- D . 12 to 15

1. _____

2. A reading teacher recorded the number of pages read in an hour by each of her students . The numbers are shown below .

44, 49, 39, 43, 50, 44, 45, 49, 51

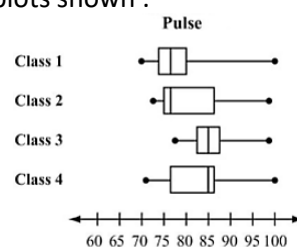
For this data, which summary statistic is NOT correct?

- A . The minimum is 39.
- B . The lower quartile is 44.
- C . The median is 45.
- D . The maximum is 51

2. _____

3. A science teacher recorded the pulse of each of the students in her classes after the students had climbed a set of stairs . She displayed the results, by class, using the box plots shown . Which class generally had the highest pulse after climbing the stairs?

- A . Class 1
- B . Class 2
- C . Class 3
- D . Class 4



3. _____

4. Peter went bowling, Monday to Friday, two weeks in a row . He only bowled one game each time he went . He kept track of his scores below .

Week 1: 70, 70, 70, 73, 75

Week 2: 72, 64, 73, 73, 75

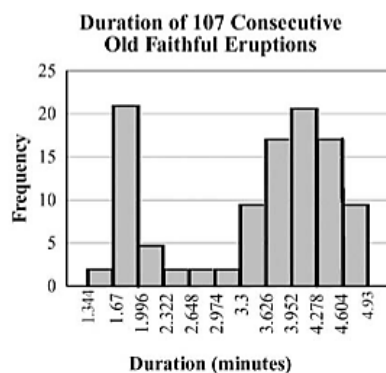
What is the BEST explanation for why Peter’s Week 2 mean score was lower than his Week 1 mean score?

- A . Peter received the same score three times in Week 1.
- B . Peter had one very low score in Week 2.
- C . Peter did not beat his high score from Week 1 in Week 2.
- D . Peter had one very high score in Week 1.

4. _____

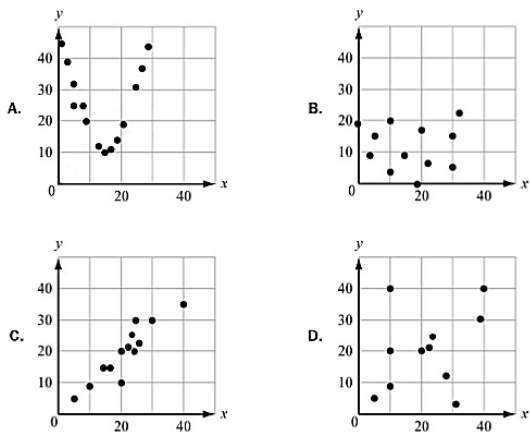
5. This histogram shows the frequency distribution of duration times for 107 consecutive eruptions of the Old Faithful geyser . The duration of an eruption is the length of time, in minutes, from the beginning of the spewing of water until it stops . What is the BEST description for the distribution?

- A . bimodal
- B . uniform
- C . multiple outlier
- D . skewed to the right



5. _____

6. Which graph MOST clearly displays a set of data for which a quadratic function is the model of best fit?



6. _____

7. To rent a carpet cleaner at the hardware store, there is a set fee and an hourly rate. The rental cost, c , can be determined using this equation when the carpet cleaner is rented for h hours. $c = 25 + 3h$ Which of these is the hourly rate?

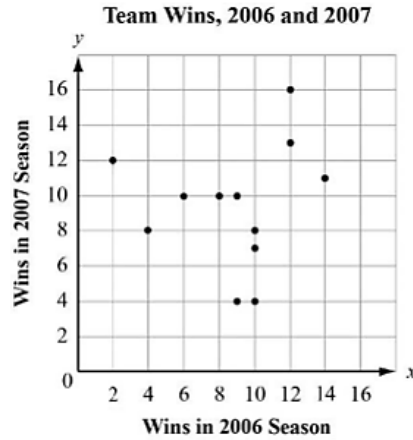
- A . 3
- B . $3h$
- C . 25
- D . $25h$

7. _____

8. This graph plots the number of wins in the 2006 season and in the 2007 season for a sample of professional football teams .

Which equation BEST represents a line that matches the trend of the data?

- A . $y = x + 2$
- B . $y = x + 7$
- C . $y = \frac{3}{5}x + 1$
- D . $y = \frac{3}{5}x + 5$

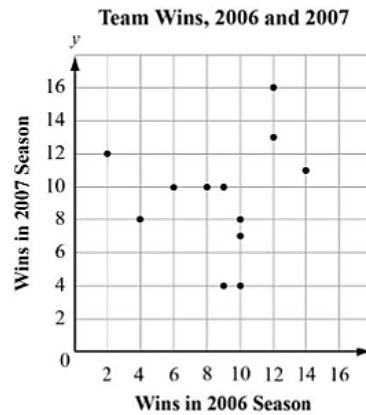


8. _____

9. This graph plots the number of wins in the 2006 season and in the 2007 season for a sample of professional football teams .

Based on the regression model, what is the predicted number of 2007 wins for a team that won 5 games in 2006?

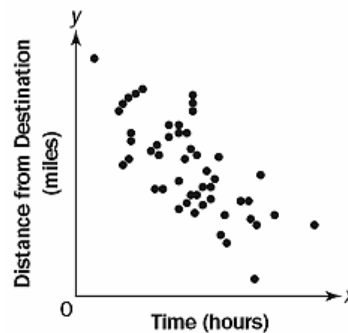
- A . 4
- B . 7
- C . 8
- D . 12



9. _____

10. Which BEST describes the correlation of the two variables shown in the scatter plot?

- A . weak positive
- B . strong positive
- C . weak negative
- D . strong negative



10. _____

11. Which of these statements is an example of causation?

- A . When the weather becomes warmer, more meat is purchased at the supermarket.
- B . More people go to the mall when students go back to school.
- C . The greater the number of new television shows, the fewer the number of moviegoers.
- D . After operating costs are paid at a toy shop, as more toys are sold, more money is made.

11. _____