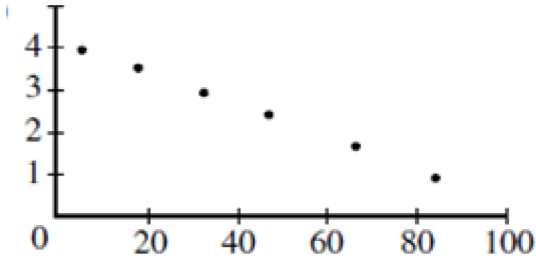


Name: _____ Class: _____ Date: _____

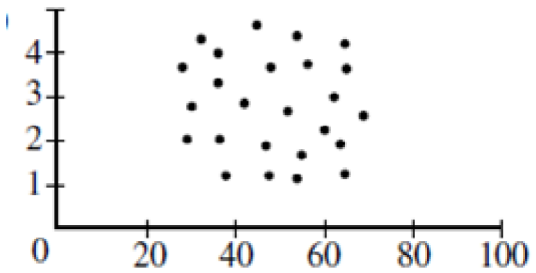
I

STATS REDEMPTION PROBLEMS**Multiple Choice***Identify the choice that best completes the statement or answers the question.*

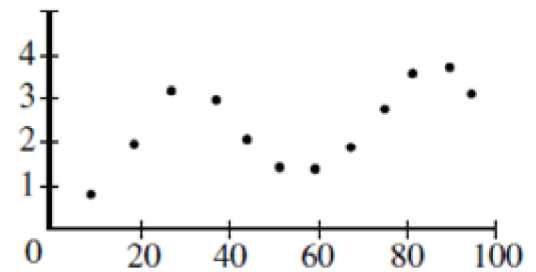
1. Which of the following scatterplots could represent a set of data whose correlation coefficient is: $r = 0$?



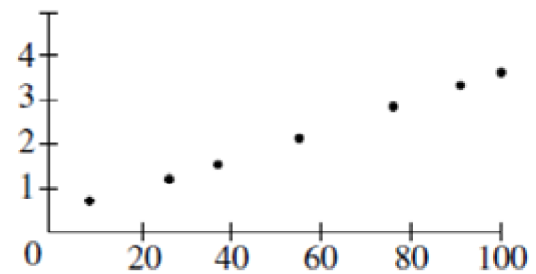
a.



b.



c.



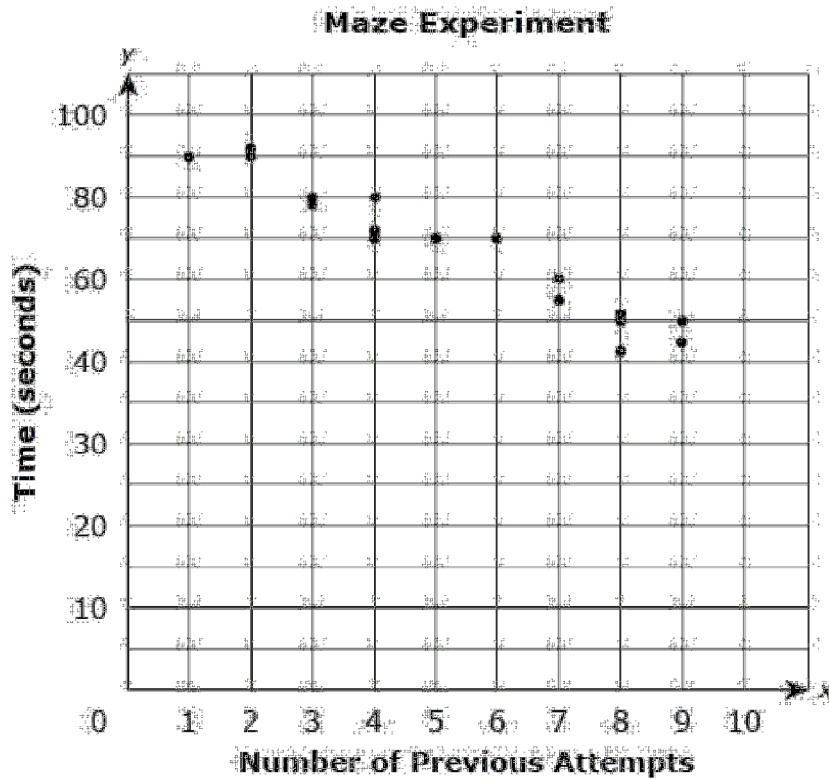
d.

Name: _____

ID: A

2.

Several students completed a paper-and-pencil maze multiple times in an experiment. Their times, in seconds (y), were plotted against the number of previous attempts they had made (x) in a scatter plot as shown.



A linear model that describes the data is given by the equation $y = -6x + 99$.

Interpret the slope in the context of the problem.

- For each additional Previous Attempt, the time in the maze increases by 6 seconds.
- For each additional second in the maze, the number of Previous Attempts increases by 99.
- For each additional Previous Attempt, the time in the maze decreases by 6 seconds.
- For each additional second in the maze, the number of Previous Attempts decreases by 99.

Name: _____

ID: A

3. 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.

	Monday	Tuesday	Wednesday	Thursday	Friday
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?

- Peter received the same score three times in Week 1.
 - Peter had one very low score in Week 2
 - Peter did not beat his high score from Week 1 in Week 2
 - Peter had one very high score in Week 1.
4. The following two-way table shows the relationship between student participation in extracurricular activities in high school and college acceptance.

Extracurricular Activities and College Acceptance			
	College Acceptance	College Rejection	Total
Extracurricular Activities	385	256	641
No Extracurricular Activities	192	64	256
Total	577	320	897

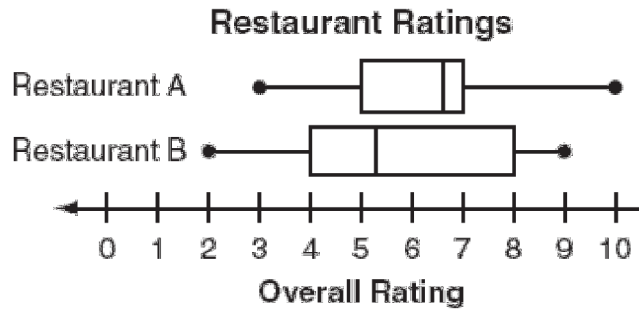
What percentage of students that participated in extracurricular activities were accepted to college?

- 60.06%
- 39.94%
- 66.72%
- 42.92%

Name: _____

ID: A

5. A group of 100 people were asked to rate two restaurants on a scale from 0 to 10. The results are represented by this double box-and-whisker plot.



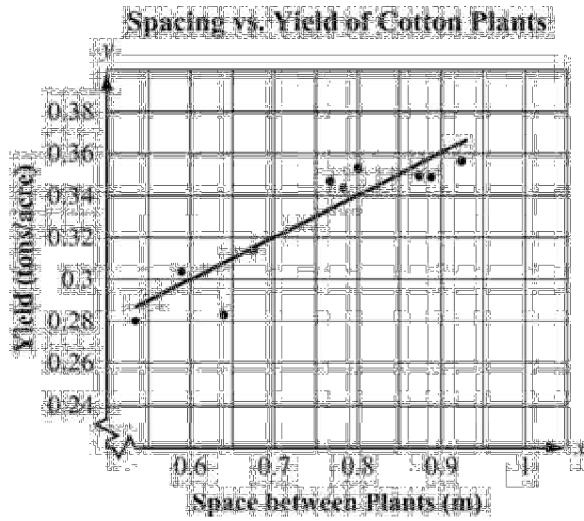
Which statement is correct?

- The range of ratings is greater for Restaurant A than for Restaurant B.
- The range of ratings is greater for Restaurant B than for Restaurant A.
- The interquartile range of ratings is greater for Restaurant A than for Restaurant B.
- The interquartile range of ratings is greater for Restaurant B than for Restaurant A.

Name: _____

ID: A

6. This graph shows the average space between cotton plants and the yield of cotton per acre for a sample of farms in an area. The regression line for the data is included.



A student uses the regression line to estimate the yield when the space between plants is 1.0 meter. Which statement BEST explains why the student's estimate may not be accurate?

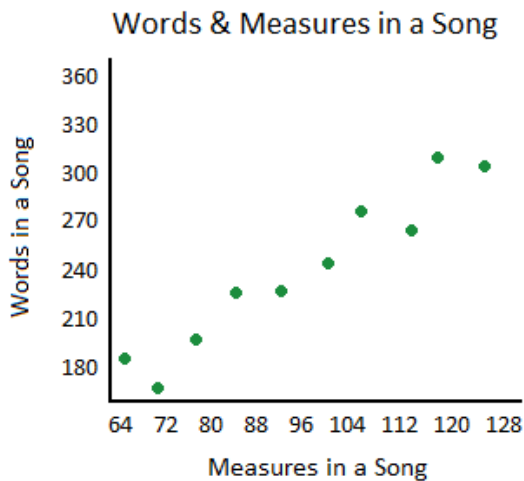
- The x -values are unevenly spaced.
- The data suggests that the relationship is quadratic.
- There is a high degree of scatter about the regression line.
- The extrapolated value is not shown on the regression line.

Name: _____

ID: A

7. Chris is a songwriter who wondered if there was a correlation in his music between the number of measures in a song and the number of words in the song.

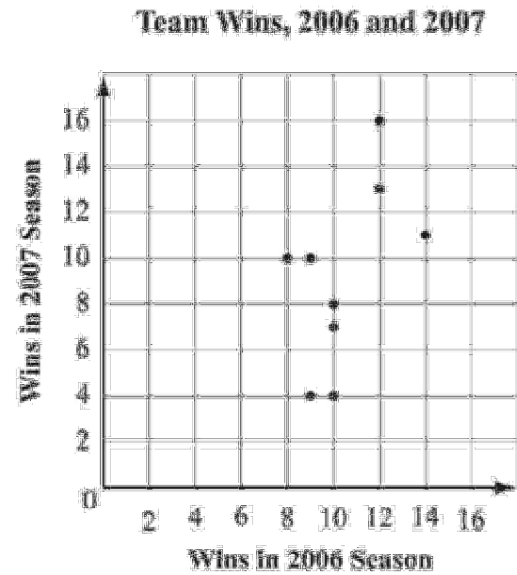
Chris is a songwriter who wondered if there was a correlation in his music between the number of measures in a song and the number of words in the song.



What can be interpreted from this data?

- There is both a positive and a negative correlation between the number of measures in a song and the number of words in a song.
- There is a negative correlation between the number of measures in a song and the number of words in a song.
- There is a positive correlation between the number of measures in a song and the number of words in a song.
- There is no correlation between the number of measures in a song and the number of words in a song.

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



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

- $y = \frac{1}{2}x$
- $y = 2x - 6$
- $y = \frac{1}{2}x + 8$
- $y = 2x - 12$

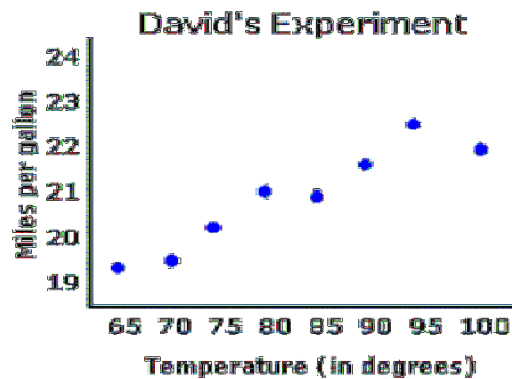
Name: _____

ID: A

9. The scores for the 33 participants in a fund-raising golf tournament are represented in the graph below. In which interval is the median score found?



- a. 90-99 b. 100-109 c. 80-89 d. 70-79
10. David wondered if the temperature outside affects his gas mileage. He recorded the temperature and his gas mileage over the last few months. His data is shown below.



Which of the following is true?

- a. There is no correlation between temperature and gas mileage. c. There is both a positive correlation and a negative correlation between temperature and gas mileage.
- b. There is a negative correlation between temperature and gas mileage. d. There is a positive correlation between temperature and gas mileage.

STATS REDEMPTION PROBLEMS**Answer Section****MULTIPLE CHOICE**

- | | | | |
|------------|--------|-------------|---------------|
| 1. ANS: B | PTS: 1 | NAT: S.ID.8 | LOC: G9.U4 |
| 2. ANS: C | PTS: 1 | NAT: S.ID.7 | LOC: G9.U4.C3 |
| 3. ANS: B | PTS: 1 | DIF: 1 | NAT: S.ID.3 |
| LOC: G9.U4 | | | |
| 4. ANS: A | PTS: 1 | DIF: 2 | NAT: S.ID.5 |
| LOC: G9.U4 | | | |
| 5. ANS: D | PTS: 1 | DIF: 2 | NAT: S.ID.1 |
| LOC: G9.U4 | | | |

6. ANS: C

The BEST answer is that there is a large degree of scatter about the regression line. However, this is an extrapolation which may confuse students as extrapolation is used with extreme caution and is generally thought to have a higher amount of inaccuracy.

- | | | | |
|------------|--------|--------------|----------------|
| | PTS: 1 | NAT: S.ID.6a | LOC: G9.U4.C3. |
| 7. ANS: C | PTS: 1 | NAT: S.ID.6 | LOC: G9.U4 |
| 8. ANS: D | PTS: 1 | NAT: S.ID.6c | LOC: G9.U4 |
| 9. ANS: C | PTS: 1 | DIF: 1 | NAT: S.ID.2 |
| LOC: G9.U4 | | | |
| 10. ANS: D | PTS: 1 | NAT: S.ID.9 | LOC: G9.U4 |