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565 Warburton Avenue
Yonkers, New York 10701
Tel. 914 376-8425
Fax 914 376-8475
dsolimene@yonkerspublicschools.org

Summer Math

Summer Assignment for:

College Link Statistics

Created by **Mrs. Rodriguez**

Dear Parent(s)/Guardians and Students:

In preparation for the upcoming school year, the following summer math assignment will provide the necessary practice for your child to be "ready" for the expectations of his/her college class. This assignment was prepared by the teacher so that your child will maintain and/or reinforce the prerequisite skills essential for success in mathematics at college level.

It has been our experience to witness upon return to school in September, that many prerequisite mathematical skills are lost due to the absence of regular practice over the summer. The loss of these skills may contribute to unnecessary frustration and possible lack of success for students as they begin this journey. Retaining skills as students move up to college courses is crucial to their academic performance. For this reason, a summer assignment has been created.

Upon entering the new school year in September, **your child should bring his/her completed assignment to the classroom.** Students are strongly encouraged to complete this grade level assignment. It **will not be graded** but will be used as a tool for finalizing the student placement on the college level class.

Thank you for your continued trust and support.

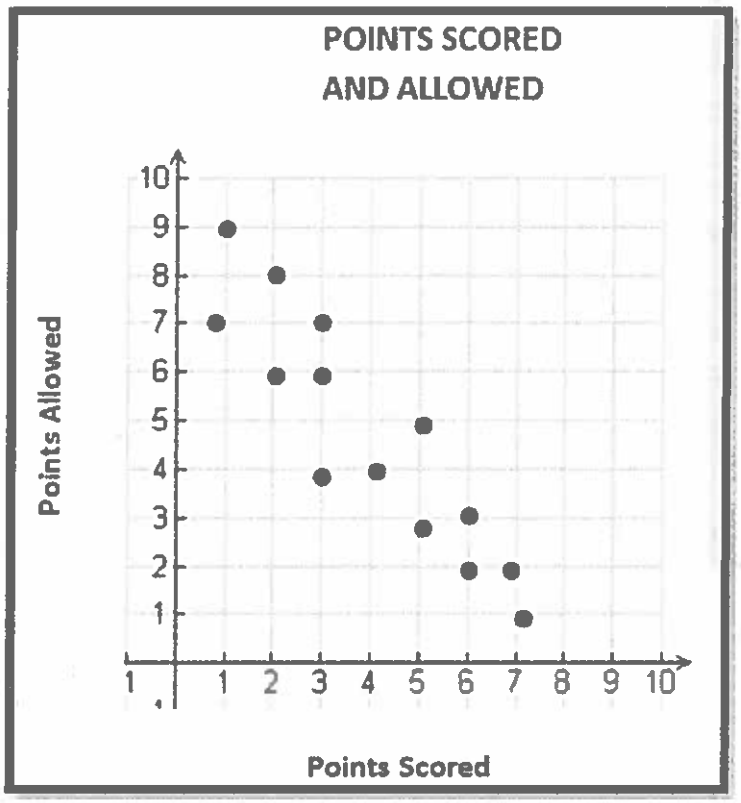
Have a fantastic summer!

Maria M. Rodriguez

Name: _____
Teacher: Rodriguez

CL Statistics - Summer Assignment

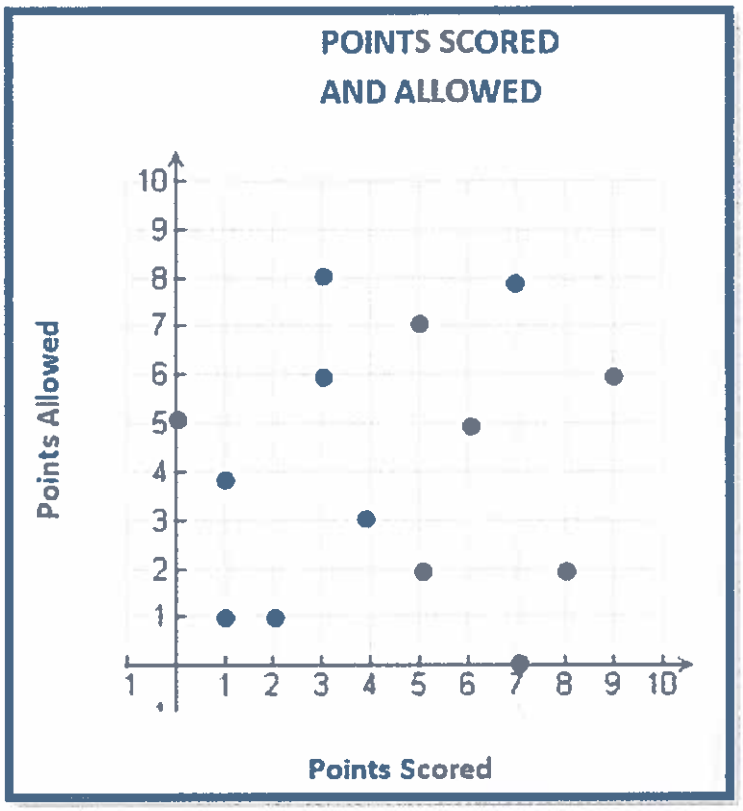
1. The scatter plot below shows the points scored and the points allowed by the Titans soccer team for several games.



Which association (correlation) best describes the data?

1. No association (correlation)
2. Positive association (correlation)
3. Negative association (correlation)
4. Nonlinear association (correlation)

2. The scatter plot below shows the points scored and the points allowed by the Knights baseball team for several games.



Which association (correlation) best describes the data?

1. No association (correlation)
2. Positive association (correlation)
3. Negative association (correlation)
4. Nonlinear association (correlation)

3. What type of relationship exists between the number of pages printed on a printer and the amount of ink used by that printer?

1. positive correlation, but not causal
2. positive correlation, and causal
3. negative correlation, but not causal
4. negative correlation, and causal

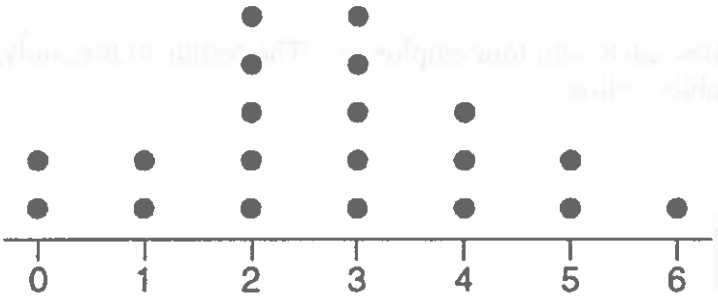
4.

The table below shows the number of airplanes taking off from each terminal at O'Hare International Airport recorded over a period of time.

Terminal	Number of Take-offs
Terminal 1	36
Terminal 2	42
Terminal 3	46
Terminal 5	36

Explain how a member of the airport staff could use these data to predict about how many of the next 80 flights will take off from Terminal 2.

5. The dot plot shown below represents the number of pets owned by students in a class.



Which statement about the data is *not* true?

1. The median is 3.
2. The interquartile range is 2.
3. The mean is 3.
4. The data contain no outliers.

6. Julie averaged 85 on the first three tests of the semester in her mathematics class. If she scores 93 on each of the remaining tests, her average will be 90. Which equation could be used to determine how many tests, T, are left in the semester?

1. $\frac{255+93T}{3T}=90$
2. $\frac{255+90T}{3T}=93$
3. $\frac{255+93T}{T+3}=90$
4. $\frac{255+90T}{T+3}=93$

7. The table below shows the number of grams of carbohydrates, x, and the number of calories, y, of six different foods.

Carbohydrates (x)	Calories (y)
12	240
5	120
11	250
7	189
8	191
3.5	76

Which equation best represents the line of best fit for this set of data?

1. $y = 23x + 6$
2. $y = 19.8x + 24.4$
3. $y = 17x$
4. $y = 5.7x - 177.7$

8. Marla collects data from two different companies, each with four employees. The results of the study, based on each workers age and salary, are listed in the tables below.

Company 1

Worker's Age in Years	Salary in Dollars
24	32,000
26	34,000
28	38,000
34	52,000

Company 2

Worker's Age in Years	Salary in Dollars
25	32,000
28	36,000
30	40,000
33	60,000

Which statement is true about these data?

1. The median salaries in both companies are greater than $37,000.
2. The mean salary in company 1 is greater than the mean salary in company2.
3. The salary range in company 1 is greater than the salary range in company 2.
4. The mean age of workers at company 2 is greater than the mean age of workers at company 1.

9. Mrs. Porter recorded her students' grades in the frequency table below.

Score	Frequency
96	2
92	5
88	3
84	2
78	4
60	1

Which statement is true for the data?

1. mean > median > mode
2. mean > mode > median
3. mode > median > mean
4. median > mean > mode

10. There are 4 students running for Student Government President. A survey was taken asking 100 students which candidate they would vote for in the election. The results are shown in the table below:

Candidate's Name	Number of Supporters
Ashley	30
Britney	28
Lyshon	14
Walker	28

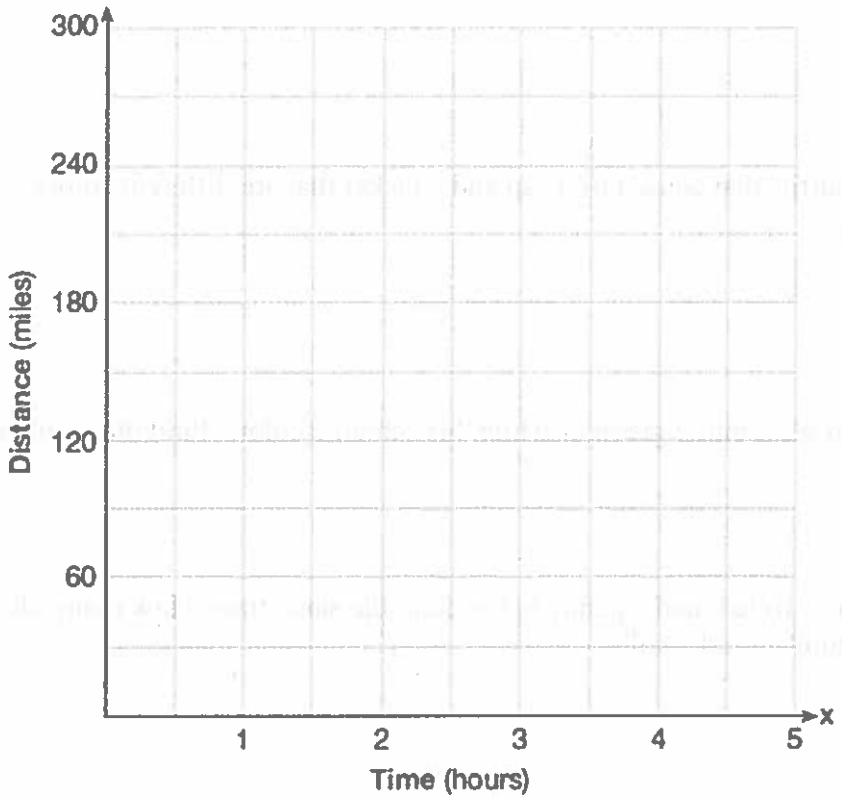
Based on the table, what is the probability that a student chosen at random will vote for Lyshon?

1. $\frac{3}{10}$
2. $\frac{7}{25}$
3. $\frac{7}{50}$
4. $\frac{43}{50}$

11.

A driver leaves home for a business trip and drives at a constant speed of 60 miles per hour for 2 hours. Her car gets a flat tire, and she spends 30 minutes changing the tire. She resumes driving and drives at 30 miles per hour for the remaining one hour until she reaches her destination.

On the set of axes below, draw a graph that models the driver's distance from home.



12. Noj has the following test scores:

76, 84, 69, 74, 91

His teacher will allow him to retake the test on which he scored lowest. Noj wants an average of *at least* 82. Determine the *least* number of additional points Noj must score on the retest.

1. 85
2. 16
3. 26
4. 82

13.

Doug has four baseball caps: one tan, one blue, one red, and one green. He also has three jackets: one blue, one red, and one white.

PART (A): Draw a tree diagram or list a sample space to show all possible outfits consisting of one baseball cap and one jacket.

PART (B): Find the number of Doug's outfits that consist of a cap and a jacket that are different colors.

PART (C): On Spirit Day, Doug wants to wear either green or white, his school's colors. Find the number of his outfits from which he can choose.

14. A cube, with faces numbered 1 to 6, is rolled, and a penny is tossed at the same time. How many elements in the sample space consist of an even number and a tail?

1. 12 3. 3
2. 2 4. 4

15.

The menu for the high school cafeteria is shown below.

Main Course	Vegetable	Dessert	Beverage
veggie burger	corn	gelatin	milk
pizza	green beans	fruit salad	juice
tuna sandwich	carrots	yogurt	bottled water
frankfurter		cookie	
chicken tenders		ice cream cup	

Part (A): Determine the number of possible meals consisting of a main course, a vegetable, a dessert, and a beverage that can be selected from the menu.

Part (B): Determine how many of these meals will include chicken tenders.

Part (C): If a student chooses pizza, corn or carrots, a dessert, and a beverage from the menu, determine the number of possible meals that can be selected.