



Einstein High School

Summer Assignment SAMM



Teacher(s): Mrs. Piercey

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Course: Statistics and Math Modeling

Purpose of the Summer Assignment: to prepare students for the Statistics first semester. The summer assignment is a review of the probability and statistics the students covered in earlier courses.

Relationship between Summer Task and 1st Quarter Objectives: The first semester provides preparation and background to maximize the potential for success in a college statistics course. The number of students who take statistics courses in college is greater than the number taking calculus courses, as one or more statistics courses are required for most majors, including engineering, psychology, sociology, and business. The increased visibility and use of data creates a need for new statistical skills in today's society. Technological advances in computers and graphing calculators provides the means to access, store, process, organize, and represent vast amounts of data. News polls, consumer price indexes, stock market data, and quality control information bombard the public via television, radio, newspapers, magazines, and the Internet. Interpreting and analyzing data requires the mastery of statistical skills that are the focus of the first semester of Statistics and Mathematical Modeling.

Description of the Task: The summer work is a review of the probability and statistics learned in Algebra 1 and Algebra 2

Supportive Resources: Students may google the topics on the assignment to find instructions if they need them. There are many sites including Khan Academy, PatrickJMT, Video Math.com. and others.

Grading:

DUE DATE: September 7, 2018

DEADLINE: September 11, 2018

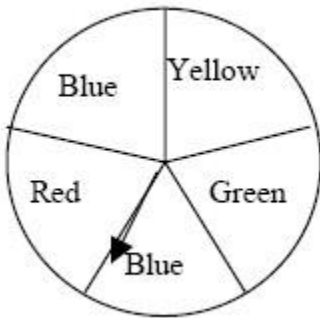
Grading Category: Completion Points: 25 points (half of score out of 50 points available)

Grading Criteria and Rubric: *(on the assignment)*

SAMM Summer Assignment

Part 1: Probability (7 pts)

- 1) What is the probability of the spinner landing on Yellow? _____
- 2) What is the probability of the spinner landing on Blue? _____
- 3) What is the probability of the spinner not landing on Blue? _____
- 4) What is the probability of the spinner not landing on Red or Blue? _____
- 5) What is the probability of the spinner landing on Red? _____
- 6) What is the probability of the spinner landing on Yellow or Green? _____
- 7) What is the probability of the spinner not landing on Green? _____



Part 2: Calculating Mean, Median, Mode and Range: (12 Pts)

Directions: In the space to the right, determine the mean, median, mode, and range for each data set.

- 1) 22, 7, 22, 1, 7, 18, 18, 16, 6, 6 mean = _____ median = _____ mode = _____
range = _____
- 2) 3, 13, 16, 3, 12, 8, 22, 16, 8, 6 mean = _____ median = _____ mode = _____
range = _____
- 3) 20, 19, 22, 8, 20, 6, 6, 6, 6, 15 mean = _____ median = _____ mode = _____
range = _____

Part 3: Frequency Table (12 pts)

Jenni is working on her high jump skills. Her friend Nancy records the height of every jump she attempts. Make a tally and frequency chart of the heights that Jenni attempts.

Height in inches – 54, 78, 82, 59, 60, 74, 58, 96, 77, 82, 76, 88

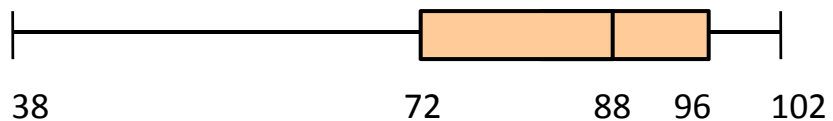
Grade Range Tallies Frequency

Grade	Range	Tallies	Frequency
51 - 60			
61 - 70			
71 - 80			
81 - 90			

Part 4: Box plots (4 pts)

For questions 1 – 6, refer to the box & whisker graph below which shows the test results of a math class.

Test Scores (as %) for 6th Period



- _____ 1. What was the high score on the test?
- _____ 2. What percent of the class scored above a 72?
- _____ 3. What was the median score on the test?
- _____ 4. What percent of the class scored between 88 & 96?

Part 5: Two way tables (9 points)

Debbie counts the videos and DVDs she has and places them into categories.

	Videos	DVDs	TOTAL
Film	43	16	
Comedy		5	17
Sport	21		
TOTAL		24	100

- a) Complete the table above.
One of the items is chosen. Calculate the probability of choosing
- b) a DVD.
- c) a comedy on video.

- d) A DVD is chosen. Calculate the probability of it being sport.
- e) it not being comedy.

Part 6: Writing Linear Equations (6 pts)

1. The line containing the points (2, 6) and (5, 0).
2. The line containing the points (5, -2) and (8, 4).
3. The line containing the points (3, 5) and (-3, 0).
4. The line containing the points (10, 15) and (12, 20).