AP Statistics Summer Assignment 2018-2019

Greetings and congratulations on joining AP statistics for the **2018-2019** academic school year!

You will find that statistics challenges your ability to communicate and report your findings, based on sample data from various fields of interest, in ways that ensure accuracy and the least amount of bias.

To prepare for this coming academic school year I'd like you to prepare yourself and become familiar with your Texas Instrument. In the classroom I will be instructing with a TI-84 Plus CE.

You are not restricted to only a TI-84. You may use a TI-83 plus, TI-84, TI-89 [titanium] or more advanced. However, you will be responsible to navigate your way through your technology independently if you chose to deviate from TI-84. Note: You will only be able to get so far *without* a Texas Instrument in AP Statistics but I assure you, it is a great investment in your academic career. You will go on to later use this calculator in all math classes, calculus [**TI 89**; integrals and derivatives], psychology courses, the scientific field, and physics. *(I've had my TI-83 since high school, and my TI-89 since college)*

Summer Assignment:

1) **Acquire a Texas Instrument: TI 84** *OR* **TI 84 Plus** *OR* **TI 84 Plus CE**
   a. Borrow? - Family, friends, extended family.
   b. Purchase? I know that there are usually sales through Target or Walmart for back to school supplies, TI's go on sale around then, but don't wait till the end to do your summer assignment!

2) **Research** and then **perform** of the functions for using the following in you TI-84: *(this is not intended to overwhelm you, just to get familiar with some basic commands you'll be using, YouTube is a good source!)*

Use the following data for parts a-c: Below are 10 pieces of data from children ages 10-12 who reported how many donuts they can eat in 30 seconds* *fiction*

4, 12, 16, 27, 3, 18, 7, 6, 11, 6

   a. *How many pieces of data are there?*
   b. *Enter your data into your calculator using* **Stats>Edit>1> Table with L1**. (you might have to clear pre-existing data…)
   c. Perform **1-var Stats**, what data do you get as an output? Write 1-2 sentences explaining these pieces of data are.

Use the following data to aid you in parts d-f: Below is data that accompanies the amount of donut eating a child ages 10-12 can eat, respectively. This data represents the amount of glasses of milk drank compared to the amount of donuts eaten. **2, 8, 9, 12, 1, 6, 3, 3, 8, 4**

   d. Enter this data into L2 (use part b from above If you need help)
   e. Run LinReg a+bx, what data do you get as an output? Write 1-2 sentences explaining these pieces of data are.
   f. (**Optional**) Can you figure out how to make a scatter plot of this data using L1 as *x*, and L2 and *y* axis?

3) Answer the following questions based on the two – way frequency table. Over a weekend, Marshall counted the number of single scoop ice creams ordered at his store. He tracked the flavors and the day on which it was ordered.

	Saturday	Sunday	Total
Chocolate	1	1	2
Vanilla	3	1	4
Cookie Dough	2	3	5
Total	6	5	11

a) What is the probability of someone buying a Chocolate ice cream on Saturday?

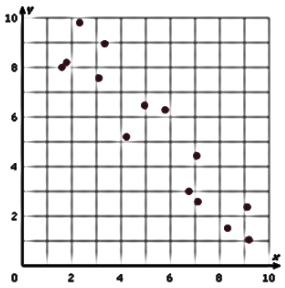
b) What is the probability of some buying Vanilla ice cream?

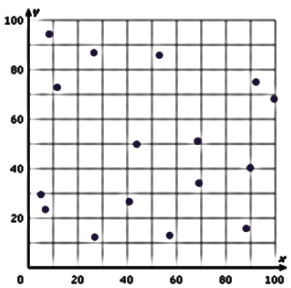
c) What is the probability of it being Saturday on the days observed?

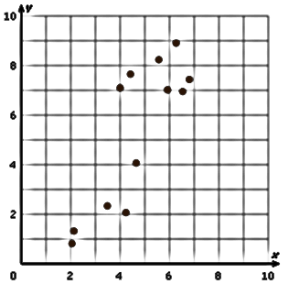
d) What is the probability of buying cookie Dough on Sunday?

4)

a. Tell whether each of the scatterplots has a positive trend, negative trend, or no trend. (**Direction**)







b. Tell whether each of the scatter plots has a strong, weak, or no correlation (**Strength**)

c. Tell whether each of the scatter plots has a linear or non-linear pattern forming. (**linear or not**)

<u>Requirements:</u>

For #1 and 2: Your final product should be Typed, MLA format, 12 point font, 1.5 spaced, Times New Roman.

For #3 and 4, you may write on this page and attach it.