

Summer Homework for AP Statistics

We will be using either the TI-84 (84 plus) or the TI-Nspire in class next year. While I will be teaching exclusively from the TI-84, the TI-Nspire is a great device in that it is much more than a traditional graphing calculator.

- It has more statistical features than the TI-84+
- Approved for use on the SAT and AP exams.

Check out the TI website for more information:

<http://www.ti-nspire.com/tools/nspire/index.html>

The TI-84 (84 plus) is a fine tool that will meet all requirements for this course. The TI-Nspire is simply more versatile and has a few extra bells and whistles. If you already have a TI-84+, it is your choice as to upgrading. A TI-83 or TI-89 graphing calculator is generally **not** recommended.

It is part of your Summer Homework assignment to obtain one of these calculators prior to the start of class.



This assignment is due Friday, August 13th, 2019. **It will be your first quiz/exam grade—worth 100 points—for the class. Don't forget to put your name on your paper! (1 point)**

- Collect three newspaper, magazine or Internet journal articles** that include statistical concepts. These may include things like graphs, charts or averages. They may also report conclusions made as a result of looking at data. For each of the articles, highlight the statistics mentioned and answer the following questions on another sheet of paper (10 points each):
 - What was the purpose of the article? Why was it written?
 - Were any conclusions stated? If so, what were they?
 - Is the article convincing? Do you believe the stated results? Explain.

BE SURE TO INCLUDE A COPY OF EACH ARTICLE APPROPRIATELY MOUNTED (cut out and then taped or glued to a piece of paper), WITH ITS SOURCE.

- Algebra I & II practice.** Copy the given information and answer each question on your own paper. On **graph paper**, sketch the graph and state the slope and y-intercept of each line (1 point each):

a. $y = \frac{2}{3}(2x - 4)$

b. $3x + 2y = 14$

c. $\frac{1}{3}y - 6x = 4$

Solve for the variable (show your work):

d. $4(x - 2) = 3^2 - x$

e. $\frac{1}{3}n + 3 = n - 2$

f. $9(2p + 1) - 3p > 4p - 6$

g. $\frac{2}{3}y = \frac{8}{27}$

h. $(q - 12)3 \leq 5q + 2$

i. $\frac{m}{12} + \frac{5}{6} = \frac{5}{24}$

j. $-3x^2 + 343 = 0$

k. $x^2 - 8x + 7 = 0$

l. $2\sqrt{x} + 9 = 21$

m. $\sqrt{2x + 10} = x + 1$

n. $\ln x = 1.6873$

o. $\log_3 81 = x$

p. $\log_3 x = 5$

q. $\log_x 256 = 8$

r. $\log 42.117 = .4x - 3.08$

s. $\log_5(x - 4) = 0$

Write the equation of the line containing the given points (show your work):

t. $(6, -2)$ and $(0, 5)$

u. perpendicular to: $y = 2x - 1$, contains $(2, 7)$

- Takahashi, Shin—The Manga Guide to Statistics, No Starch Press, 2008
- Tal, J.—Reading Between the Numbers, Statistical Thinking in Everyday Life, McGraw-Hill, 2000
- Taleb, N.—Fooled by Randomness: The Hidden Role of Chance in Life and in the Markets, Thomson, 2004
- Taleb, N.—The Black Swan: The Impact of the Highly Improbable, Thomson, 2007
- Tufte, Edward R.—Envisioning Information, Graphics Press, 1990
- Tufte, Edward R.—The Visual Display of Quantitative Information, Graphics Press, 2001