

The corresponding **U.S. Population Growth** data chart is located in Desire2Learn.

- (1) First find the missing population data value for 2010, rounding to the nearest tenth of a million people, like the given values. Give the official census figure here; _____ (with no rounding). Provide a resource to support your answer.
- (2) Then, input the data into your TI graphing calculator using the STATistical lists. Let 1900 = year 0, 1910 = year 10, etc., so you will only be entering the data for the census years from 1900-2010.

I did it! Signature: _____

- (3) Find the exponential regression equation and the correlation coefficient for this data. Round to 4 decimal places for each coefficient. Write these on the graph.
- (4) Predict the U.S. population for 2020, 2030, 2040, 2050, and 2100. Round to the nearest tenth of a million people (just like the original data).

Census Year	Population (in Millions)
2020	
2030	
2040	
2050	
2100	

- (5) Convert the regression equation from $y=ab^x$ form to the form $y=ae^{(kx)}$. Show your work using logarithms below.
- (6) For 4 extra bonus points, complete the chart by finding the U.S. population density for the years 2000 and 2010. Provide a resource to support your answer(s). Record those on the given data chart.

NOTE: The “resources” for #1 and #6 need to be a printout with URL address and with the pertinent information highlighted.

Do your best! Live and learn!