

Population Predictions

1. Predict populations for the following cities. Record your results in the chart below. Choose two other cities of your choice and predict their populations in the bottom two rows.

City/Town	Predicted population (x)	Actual population (y)	Regression $y = mx + b$
Boone			
Elkin			
Greensboro			
Mount Airy			
Ocean Isle			
Wilmington			
Winston Salem			

2. Go to www.census.gov. Locate the “Population Finder” on the right side of the site. Find the actual population for the cities listed in the chart. Record your results in the chart above.
3. Write a regression equation comparing the predicted population to the actual population for each city. Round the slope and y – intercept to 2 decimal places.

4. What would the equation be if you predicted the population for each city correctly? _____ Compare your results to this equation.
5. Go to Jobs@Census on the US Census website. The icon is located on the left side of the site. View “Employment Opportunities” and “Student and Research Opportunities.”
 - a. Which job or opportunity interests you the most? Explain?
 - b. What skills or talents do you already have that will contribute to the job you chose?
 - c. What skills or talents can you foresee yourself developing to be successful at this job?

ANSWER KEY

Population Predictions

Predict populations for the following cities. Record your results in the chart below. Choose two cities of your choice and predict their population.

City/Town	Predicted population	Actual population 2007
Boone		13,843
Elkin		4,083
Greensboro		247,183
Mount Airy		8,742
Ocean Isle		520
Wilmington		99,623
Winston Salem		215,348

Interpreting the scatter plots:

If the coordinates are plotted above the line $y = x$, then the student underestimated.

If the coordinates are plotted below the line $y = x$, then the student overestimated.