

**Representing World Population:
Where in the world are all of the people??**

STUDENT ACTIVITY

Which region of the world has the highest population?

In this activity, you will compare the population of different regions of the world using percents, bar graphs, and circle graphs.

For this activity, consider the world as being divided into the six regions listed in the table.



Source: <http://www.mapsofworld.com/world-political-map.htm>

Part 1: Estimated vs. Actual Population:

- Using a large copy of a world map and 25 chips of the same color, work with your partner to distribute the 25 chips across the world map according to where you think people live.
- Record the number of chips you have placed in each region in the column for "Your estimated # of chips (out of 25)."
- Use your TI-73 calculator to create a bar graph for your estimated population data for each region. [See the Calculator Support Sheet].

Region	Your estimated # of chips (out of 25)	Actual # of chips (out of 25)	Population in Millions*	Estimated % of World Population*
Africa				
Asia				
Oceania (Australia and New Zealand)				
Europe				
US and Canada				
Latin America (including Mexico)				
Total	25	25	6.5 million (6.465 million)	100.0

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Use a separate sheet of paper for your response to the following questions:

4. Your teacher will give you the actual number of chips that would represent the population of each region. Enter this data into your chart. Using the other color of chips, place chips on the map to represent the actual population of each region. Talk with your partner about how your estimates compare to the actual data.
 - a. Which region were you the most accurate?
 - b. For which region were you the most inaccurate?
 - c. Which region surprised you the most? Why?

5. The population of the world is estimated to be 6.5 billion people. Use the actual number of chips for each region to determine the population of each region in millions of people, and enter this data into your chart. Here are some hints to get you started on the first region in the chart, Africa:
 - a. How many chips (out of 25) did you use to represent the population of Africa? What percent of the chips did you use to represent the population of Africa?

 - b. Explain how you can use this information to determine the population of Africa (in millions of people):

 - c. Show your work for Africa:

 - d. Enter the population of Africa into the chart. Use your procedure to find the population of the other regions.

6. Use your TI-73 to create a double bar graph of the estimated vs. actual number of chips for each region. [See the Calculator Support Sheet].

7. Were there any difference between your estimates and the actual data that that surprised you? If you wanted to make comparisons between your estimates and the actual populations, would you use the table or the graph? Why?

8. Are there differences between regions that surprise you? If you wanted to make comparisons between different regions, would you use the table or the graph? Why?

9. If you want to determine (or estimate) how many more people live in one region than other, would you use the numeric data or the graph? Why?

10. If you want to determine (or estimate) how many times as many people live in one region than other, would you use the numeric data or the graph? Why?

11. Determine the percent of world population in each region. Enter this data into your chart. Explain how you determined the percent of the world population for Africa:

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12. Create a circle graph to show the percent of world population in each region. [See the Calculator Support Sheet].
- Which comparison did you prefer, the percentages or the circle graph? Why?
 - Make 2 statements or comparisons about the populations of the different regions based on the bar graph. What information could you see more clearly in the bar graph than in the circle graph?
 - Make 2 statements or comparisons about the populations of the different regions based on the circle graphs. What comparisons are easier to make using the circle graph rather than the bar graph?
13. What are some conclusions about world population? What surprised you?

This activity is adapted from: Hersh, S. & Peterson, B. (2005). Poverty and World Wealth. In E. Gutstein & B. Peterson, *Rethinking Mathematics: Teaching Social Justice by the Numbers*, p. 64-67. Rethinking Schools Publications: Milwaukee, WI. Available at: <http://www.rethinkingschools.org/publication/math/>