Representing World Wealth:
Where in the world is all of the money??

STUDENT ACTIVITY

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

Estimated vs. Actual Wealth

1. Place 25 chips on your world map to represent the distribution of the world's population, according to the numbers given in the table below.

2. Work with your partner to place 25 pennies on your world map to represent your ideas about the distribution of the world's wealth. Record the number of pennies you have placed in each region in the column for "Estimated Wealth (# of pennies)."

3. Based on your estimates, determine the percent of the world's wealth you have placed in each region. Record your percentages in the table.

Region	**Population (# of chips)**	**Percent of World Population**	**Estimated Wealth (# of pennies)**	**Estimated % of World Wealth**	**Actual % of World Wealth**	**Amount of Wealth in $**
Africa	4	14.0				
Asia	15	60.4				
Oceania (Australia and New Zealand)	0	0.5				
Europe	3	11.3				
US and Canada	1	5.1				
Latin America (including Mexico)	2	8.7				
Total	**25**	**100.0**	**25**	**100.0**		**$28,081 billion**

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

4. Your teacher will give you the actual percent of world wealth for each region. Enter this data into your chart. 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 total amount of world wealth is estimated to be $28,081 billion. Determine the amount of wealth for each region (in billions of dollars) and enter this data into your chart.

6. Use your TI-73 (see the Calculator Support Sheet) to create a double bar graph of the estimated vs. actual percent of wealth for each region.

    If you wanted to make comparisons between your estimates and the actual wealth, would you use the table or the graph? Why?

7. Use your TI-73 (see the Calculator Support Sheet) to create a bar graph of the actual percent of wealth for each region.
    a. Are there differences between regions that surprise you?

    b. What kinds of comparisons are easier to make using the table? What kinds of comparisons are easier to make using the graph?

8. Create a circle graph to show the percent of world wealth in each region. [See the Calculator Support Sheet].

    Make 2 statements or comparisons about the wealth of the different regions based on the circle graphs. What comparisons are easier to make using the circle graph rather than the bar graph?

Comparing population vs. wealth

9. Use your TI-73 (see the Calculator Support Sheet) to create a double bar graph of the percent of population vs. percent of wealth for each region.

   What does the double bar graph tell you when:
   a. the first bar is higher than the second bar?
   b. the first bar is lower than the second bar?
   c. the bars are about the same height?

   Which regions have the largest differences in population vs. wealth?

   Write at least 2 comparisons you can make about the can you make between the different regions:

10. Use your TI-73 (see the Calculator Support Sheet) to create a scatterplot of the percent of population vs. percent of wealth for each region. Graph the line y = x and display this line over the scaterplot.
    a. What does it mean for a region to be above the line? What region is the farthest above the line? What does that tell you about that region?

    b. What does it mean for a region to be below the line? What region is the farthest below the line? What does that tell you about that region?

    c. In what ways does the scatterplot help you make comparisons between the population and wealth of different regions of the world?

11. What are some conclusions about the distribution of the world's wealth? 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/