

Directions: use the data on this sheet to follow along with the PowerPoint lecture. When you are through, you will have a Lorenz Curve. You will also calculate the Gini Coefficient.

Step 1. You are given the following data for the small country of Alpha. Adrian, \$90; Bob \$15; Cathy, \$70; Derek, \$200; and Eddie, \$125.

Use the table below for steps 2, 3, and 4.

Step 2. Arrange income in ascending order. Complete the Name and income columns.

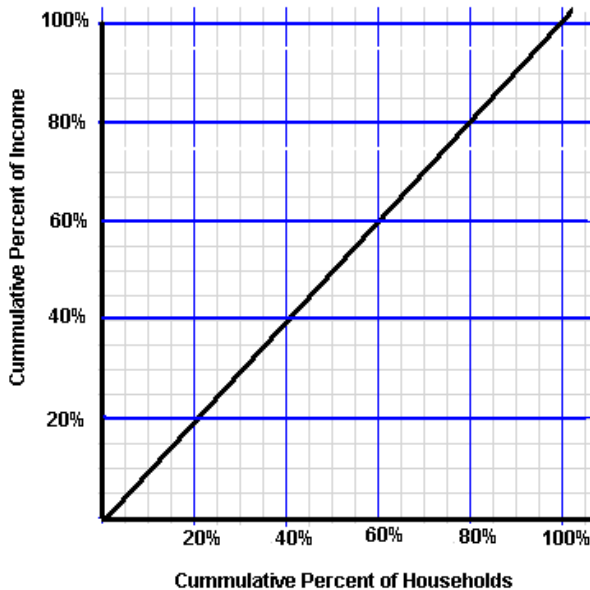
Name	Income	Percent of Total	Cumulative %
Total Income			

Step 3. Compute the total income by summing the Income column.

Step 4. Find percent of total income. Divide each income workers income by the total. Round your answers. Place your answers in the “Percent of Total column.” The first worker is Bob with an income of \$1,500.00. His percent of total is 3%.

Step 5. Calculate the cumulative percent of total. For the second worker, the cumulative percent is 17%.

Step 6. Use the graph below to plot the workers share of income by quintile.



Step 7. Calculate the area under the Lorenz Curve using the properties of a trapezoid. The base is always 20%, or .2. the formula is: $\frac{1}{2}(b1 + b2) \cdot 2 = \text{Area}$

Calculate the five areas:

- 20% _____
- 40% _____
- 60% _____
- 80% _____
- 100% _____
- Total Area _____

8a. The area of the right triangle under the line of perfect inequality is .50. You have just calculated the area under the Lorenz Curve. Now, subtract the area under the Lorenz Curve from .50 to derive the area between the line of perfect equality and the Lorenz Curve.

$$.5 - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

8b. The Gini Coefficient is calculated as the ratio between the area between the line of perfect equality and the Lorenz Curve to the right triangle under the line of perfect equality. Calculate the Gini Coefficient by dividing your answer in step 7 by .50. That is, $.33/\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$.

9. What does a Gini Coefficient of .24 infer about income equality? What does a Gini Coefficient of .70 infer about income equality? If income were perfectly distributed, what would be the slope of the Lorenz Curve?