**Graphic Organizer for Lorenz Curve**

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 Antigua. Here are five individual’s family incomes to represent all households in Antigua:

**Akhil: $90,000**

**Iyame: $15,000**

**Ajamu: $70,000**

**Hassani: $200,000**

**Iwasee: $125,000**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Income** | **Percent of Total** | **Cumulative %** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| **Total =** |  |  |  |

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

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

Step 4. Find Percent of Total income. Divide each worker’s income by the total. Round your answers. Place your answers in the “Percent of Total” column.

***HINT***: The first worker is Iyame with an income of $15,000.00. His Percent of Total is 3%.

Step 5. Calculate the *Cumulative* Percent of total.

***HINT***: For the second worker, the Cumulative Percent is 17%.

Step 6. Use the graph below to plot the workers’ share of income by *quintile*. Connecting the data points results in the Lorenz Curve.



Step 7. Calculate the area under the Lorenz Curve.

Calculate the five areas:

0-20% ………..… \_\_\_\_\_\_\_\_

20-40% ………… \_\_\_\_\_\_\_\_

40-60% ………… \_\_\_\_\_\_\_\_

60-80% ………… \_\_\_\_\_\_\_\_

80-100% ……….. \_\_\_\_\_\_\_\_

**Total Area = \_\_\_\_\_\_\_\_**

Step 8. Find the area of the right triangle under the line of perfect inequality. Now, subtract the area under the Lorenz Curve from the area of the triangle to find the area of the “sliver”.

**Sliver = \_\_\_\_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_**

Step 9. The Gini Coefficient is calculated as the ratio of the “sliver” (the area between the line of perfect equality and the Lorenz Curve) to the area of the right triangle under the line of perfect equality. Calculate the Gini Coefficient by dividing your answer to Step 8 by the area of the right triangle.

**Gini = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ / \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_**

10. Write your responses to the following questions on a separate sheet of paper:

What does a Gini Coefficient of .34 suggest about income equality?

What does a Gini Coefficient of .70 suggest about income equality?

If income were perfectly distributed, what would be the slope of the Lorenz Curve?