Health vs. Wealth

In the fight against poverty and hunger, people have been using a combination of approaches. Renowned social scientist Hans Rosling has made a number of data-driven assertions about the world, and specifically the issue of poverty. He argues that the key ingredient is reducing child mortality. Reducing child mortality in turn reduces family size which is one of the main factors in poverty.

In this assignment, you will analyze two of the most prominently used statistics: child mortality (the number of children that pass away per 1,000 births) and the per capita GDP (the income of a country divided by the number of citizens of that country). Using data from 78 countries, the goal is the find a function that best fits the data and that could be used to find the theoretical per capita GDP threshold that leads to a child mortality rate of less than 0.5% (5 children per 1,000 births).

What type of function? It is best to try different types of linear or non-linear functions and analyze which you think is best.

Use five different regression functions to model the data.

Enter the Infant Mortality Data into L1 and the GDP per Capita into L2. Use your graphing calculator to find a regression function that fits your data (looking at the scatterplot will help. Use ZOOMSTAT).

Type of Regression	Best Fit Function	Comments (Accuracy, Limitations, Concerns)

Best Fit Function	Theoretical per capita GDP threshold that leads to a child mortality rate of less than 0.5% (5 children per 1,000 births)

Justify your model.

Based on your analysis, what steps could be taken to reduce child mortality rates in an effort to fight extreme poverty and hunger?