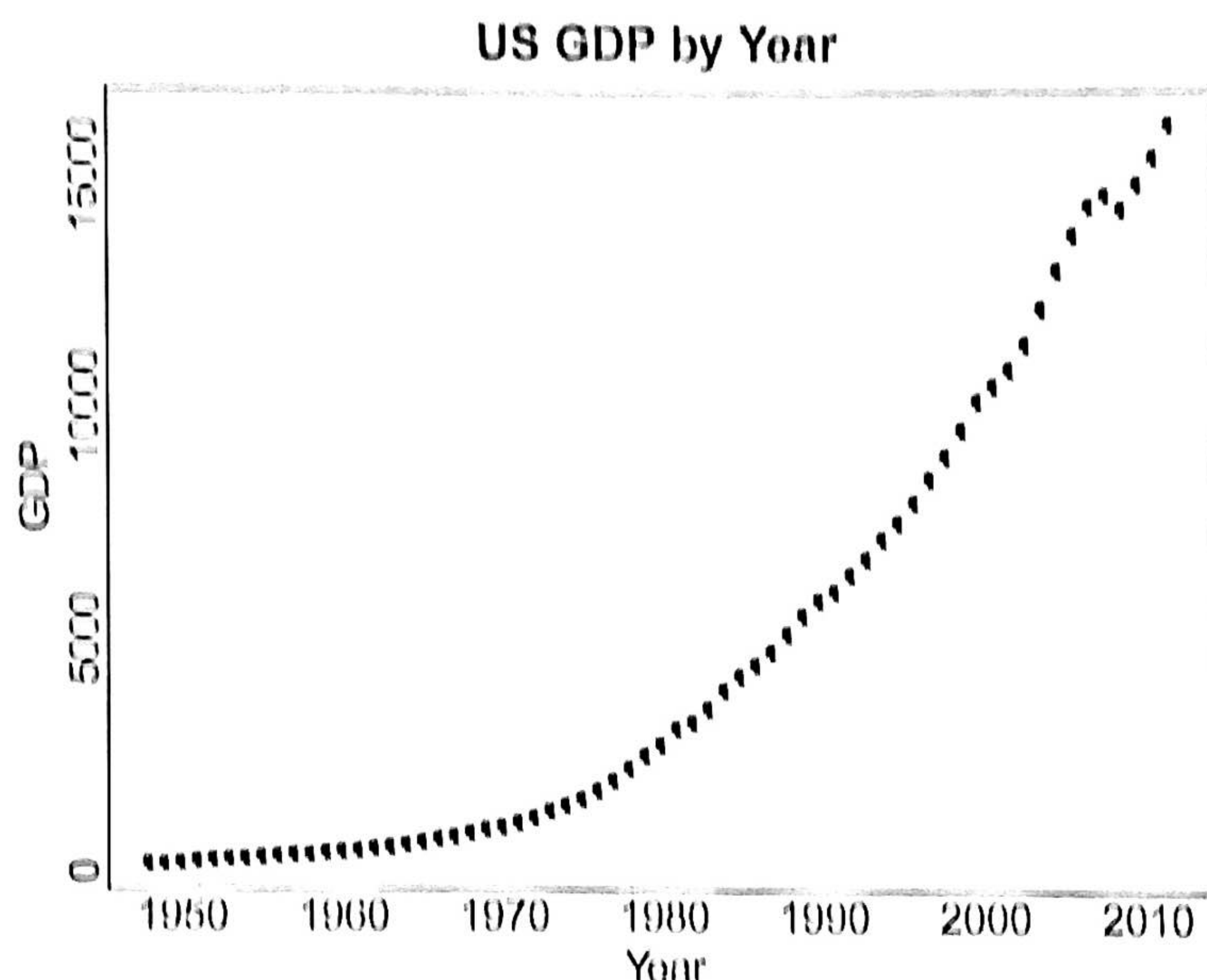


Question 7

Answer the questions below. It is possible to answer each with only two sentences and receive full credit.

- Explain how a sample distribution, a sampling distribution, and a population distribution are different *and how they are related*.
- Suppose we were interested in studying GDP in the United States. Here is a plot of this variable (the y axis is in millions of dollars):



- What concerns might we have about using spending as a dependent variable in regression? How could we address these concerns?

Spending is not a good dependent variable because of inflation. ~~How~~ ^{to} address ~~this~~ ^{these} we would use GDP Growth Rates as a dependent variable.

Sampling distribution is the ^{distribution} ~~set of~~ ^{a statistical} ~~testing~~ ^{samples} of a given random ~~variable~~ ^{sample}. Sample distribution is the distribution of data from the sample. They are related through the same random sample. Population distribution is the distribution in which every member is measured on some attribute.