Here's my analysis, as a graduate statistics student:

\*\*Understanding the Problem:\*\*

We're given a population distribution and asked to identify which of the three sample distributions (A, B, and C) is most likely to have been drawn from that population. Key concepts here are:

\* \*\*Sample vs. Population:\*\* The population is the entire group we're interested in. A sample is a subset of the population.

\* \*\*Central Limit Theorem (CLT):\*\* The CLT is at play here. As sample size increases, the distribution of sample means tends to become more normal, regardless of the original population distribution.

\* \*\*Sampling Variability:\*\* Samples will vary from the population and from each other. We need to look for a sample that reasonably reflects the population characteristics.

\*\*Analyzing the Population Distribution:\*\*

The population distribution is clearly skewed to the right, meaning it has a long tail extending towards higher values. The mean (6.4) and standard deviation (4.1) provide key information about the center and spread of the population.

\*\*Analyzing the Sample Distributions:\*\*

Let's consider each sample graph:

\* \*\*Graph A:\*\* This graph is highly skewed to the right. This could represent the sample taken from the original skewed population.

\* \*\*Graph B:\*\* This graph appears very narrow, as if it could only represent a very small standard deviation. This is unlikely to have been drawn from the original population.

\* \*\*Graph C:\*\* This graph is also narrow. This could represent the sample taken from the original skewed population, however, the mean is much higher than the population mean, which is statistically unlikely.

\*\*Conclusion:\*\*

Considering the CLT and the population characteristics, the sample most likely to represent the random sample of 500 values is \*\*(A) Graph A.\*\*

\*\*Therefore, the answer is (A)\*\*