



“FRAPPY”
{Free Response AP Problem...Yay!}

The following problem is taken from an actual Advanced Placement Statistics Examination. Your task is to generate a complete, concise statistical response in 15 minutes. You will be graded based on the AP rubric and will earn a score of 0-4. After grading, keep this problem in your binder for your AP Exam preparation.

Consider the sampling distribution of a sample mean obtained by random sampling from an infinite population. This population has a distribution that is highly skewed toward the larger values.

- (a) How is the mean of the sampling distribution related to the mean of the population?
- (b) How is the standard deviation of the sampling distribution related to the standard deviation of the population?
- (c) How is the shape of the sampling distribution affected by the sample size?

Total: /4