#1-212A

EASY INTERMEDIATE HARD

# CFA® SAMPLE QUESTION – LEVEL I

## Quantitative Methods

**Q:** To apply the central limit theorem to the sampling distribution of the sample mean, the sample is usually considered to be large if n is greater than:

**CORRECT ANSWER:**

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The central limit theorem states that if you have a population with mean μ and standard deviation σ and take sufficiently large random samples from the population with replacement, then the distribution of the sample means will be approximately normally distributed. This will hold true regardless of whether the source population is normal or skewed, provided the sample size is sufficiently large **(usually n > 30)**. If the population is normal, then the theorem holds true even for samples smaller than 30.
In fact, this also holds true even if the population is binomial, provided that min(np, n(1-p))> 5, where n is the sample size and p is the probability of success in the population.
This means that we can use the normal probability model to quantify uncertainty when making inferences about a population mean based on the sample mean.

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