#1-213A

EASY INTERMEDIATE HARD

CFA® SAMPLE QUESTION – LEVEL I

Quantitative Methods

Q: Annual returns on small stocks have a population mean of 15% and a population standard deviation of 22%. Assuming that the returns are normally distributed, a 90% confidence interval on mean returns over a 5-year horizon is:

CORRECT ANSWER:

ⓐ **-1.24% to 31.24%**

With a known population standard deviation of returns and a normally distributed population, we can apply the z-distribution to find out the confidence interval. The sample mean for a sample of 5 years will have a standard deviation of 22/(5^1/2) ==> 9.84%

A 90% confidence interval around the mean return of 15% is 15% ± 1.65(9.84%) = -1.24% to 31.24%

Commonly used z – values for Confidence Intervals

Confidence Interval	z
90%	1.645
95%	1.96
98%	2.326
99%	2.576

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