Review #1: The central limit theorem describes the characteristics of the...
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Review #1: The central limit theorem describes the characteristics of the...
Answer:

Yours

Mine

Review #2: The central limit theorem describes these three features of the distribution of means.
Review #2: The central limit theorem describes these three features of the distribution of means.

Answer:

Review #3: The standard deviation of the distribution of means is called the _____; its formula is _____.

[Blank spaces for answers]
Review #3: The standard deviation of the distribution of means is called the _____; its formula is _____.
Answer:

New material begins...

What percentage of children's IQs lie between 85 and 115?
About 68%.

What percentage of IQ means (samples of size n = 4) lie between 85 and 115?
Standard error of the mean
\[ \sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{15}{\sqrt{4}} = 7.5 \]
About 96%.

What percentage of IQ means (samples of size n = 9) lie between 85 and 115?
Standard error of the mean
\[ \sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{15}{\sqrt{9}} = 5 \]
Over 99%.
Mr. Meadows' cookies' caloric content is normally distributed with mean $\mu = 140$ calories and standard deviation $\sigma = 10$ calories.

What percentage of cookie caloric content is greater than 145 calories? By eyeball about 30%. (actually 30.85% from column B of table for $z = .5$)

What percentage of means of 16 cookies are greater than 145 calories?
Answer...

30.85%?
more than 30.85%?
less than 30.85%?
Mr. Meadows' cookies' caloric content is normally distributed with mean $\mu = 140$ calories and standard deviation $\sigma = 10$ calories.

What percentage of cookie caloric content is greater than 145?

By eyeball about 30%.
(actually 30.85% from column B of table for $z = .5$)

What percentage of means of 16 cookies are greater than 145 calories?
Standard error of the mean

$$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{10}{\sqrt{16}} = 2.5 \text{ cal}$$

By eyeball about 2%.
(actually 2.28% from column B of table for $z = 2.0$)

End of lectlet.