

Confidence Intervals

Objectives

- 1 Determine confidence intervals for population mean
- 2 Determine confidence intervals for population proportion
- 3 Determine the necessary sample size

How Close Are We to the Population Mean?

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That is where confidence intervals come into play.

How Confident Are We?

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Typical confidence levels are 90%, 95%, 98%, and 99%.

Confidence Interval Setup

A confidence interval for a population parameter is in the form

$$\text{point estimate} \pm \text{margin of error}$$

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Point Estimate

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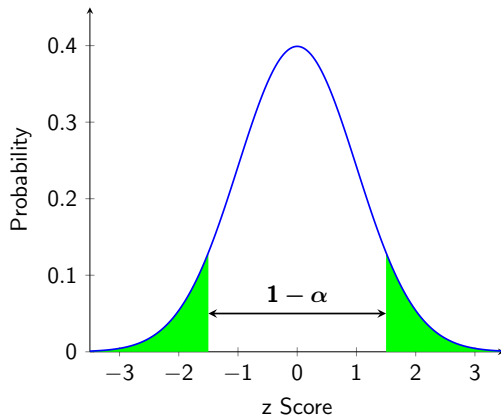
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The margin of error is in the form

critical value \times standard error

Critical Values

Critical values are typically in the form $z_{\alpha/2}$ where



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