Two Tailed Hypothesis

Authored by

mohammad looti

October 8, 2025

A Two Tailed Hypothesis is used in statistical testing to determine the relationship between a sample and a distribution. In statistics you compare a sample (Example: one class of high school seniors SAT scores) to a larger set of numbers, or a distribution (the SAT scores for all US high school seniors). A two tailed test looks at whether the sample is is greater than and/or less than the distribution. Two tailed means that you are looking at both sides (known as tails) of a distribution and seeing their relationship to the sample.

Using the SAT example, you are trying to determine if your high school class's SAT schools were the same as the US nationwide scores. You are interested in knowing if your class's scores were higher or lower than the national scores. Using a two tailed hypothesis for your statistical test you can determine if your scores were higher or lower. You would use a two tailed test because you are interested in the relationship between
both sides (tails) of the distribution.

See also: One Tailed Hypothesis