

How to Identify the Null Hypothesis

VS.

the Alternative Hypothesis



| The Null Hypothesis (H_0): | | The Alternative Hypothesis (H_a): | |
|--|---|--|---|
| Contains a statement of <u>equality</u> : | | The complement of the null hypothesis, which contains a statement of <u>strict inequality</u> : | |
| Mathematical Statements for H_0 : | Words Statements for H_0 : | Mathematical Statements for H_a : | Words Statements for H_a : |
| \geq | “greater than or equal to” “at least” “not/no less than” “not/no shorter than” | $<$ | “less than” “fewer than” “below” “shorter than” “under” |
| \leq | “less than or equal to” “at most” “not/no more than” “not/no longer than” | $>$ | “greater than” “above” “more than” “higher than” “longer than” |
| $=$ | “is equal to” “is” “is exactly” “is the same as” “did not change from” “did” | \neq | “is not equal to” “different from” “changed from” “did not equal” “not” |