

QUICK HELP

MAT 109 Statistics

Test for Relationship

Hypothesis:

H_0 : There is no relationship.

H_1 : There is a relationship.

Required Information:

α = level of significance

n = sample size

$df = (\# \text{ rows} - 1) * (\# \text{ cols} - 1)$

1. Construct an Observed table (O).
2. Calculate row percentages.
3. Use row percentages to construct an Expected table (E).
4. Construct an O-E table.
5. Construct a $(O - E)^2$ table.
6. Construct a $\frac{(O - E)^2}{E}$ table.

Test Statistic:

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

The test statistic is the sum of all of the entries in the table from step 6.

Test Limit:

$\chi^2_{\alpha}(df)$ will be the test limit