AP Statistics

Major DIFFERENCES between the three chi-square tests.

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| --- | --- | --- | --- |
|  | Goodness of Fit | Homogeneity | Independence |
| Ho | Observed counts are the same as expected counts for some categorical variable. (use words or symbols for this one) | Observed counts for some categorical variable are the same for two or more populations or treatments (use words for this one) | There is no association between two categorical variables for some population of interest. (use words for this one |
| Expected Values | (total)(expected proportion for category) | [(row total)(column total)]/(grand total) | [(row total)(column total)]/(grand total) |
| df | Categories -1 | (row-1)(column -1) | (row-1)(column-1) |
| “magic button” | For most calculators. If you do not have one, do by hand (not hard) or see Sever | Yes ☺ | Yes ☺ |

Make sure you can do all chi-square by hand, when doing a FRQ problem make sure you develop a pattern and then you can do in calculator. You cannot just give the chi-square stat and p-value.

Formula for all chi-square tests: 