

11.12: Assignment- Test of Independence Using Technology

The purpose of this activity is to gain experience conducting a chi-square test of independence using technology.

Recall the report *On the Front Line: The Work of First Responders in a Post-9/11 World*. We will use data from this report to investigate the question: Are alcohol-related problems among New York firefighters associated with participation in the 9/11 rescue?

Here again are our observed data:



Question 1:

State the appropriate hypotheses for the chi-square test for independence in this case.

Now you will check whether the conditions for the chi-square test are met. In order to do this, you'll need to first launch the actual [research report](#) and read the last paragraph on page iii of the introduction (starting with the "The study was fully funded...")

Instructions

Click on the link corresponding to your statistical package to see instructions for completing the activity, and then answer the questions below.

[R](#) | [StatCrunch](#) | [Minitab](#) | [Excel 2007](#) | [TI Calculator](#)

Question 2:

Does the data meet the conditions for the chi-square test?

Instructions

Click on the link corresponding to your statistical package to see instructions for completing the activity, and then answer the questions below.

[R](#) | [StatCrunch](#) | [Minitab](#) | [Excel 2007](#) | [TI Calculator](#)

Question 3:

State your conclusion in context. Also explain what the P-value means as a conditional probability based on the null hypothesis.

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