



4. Are Selected Jurors

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4. Are Selected Jurors Representative of the Population?

Example of Chi Squared goodness of fit testing

3/3 points (graded)

In lecture you saw the following data:

Race	White	Black	Hispanic	Other	Total
# jurors	205	26	25	19	275
proportion in county	0.72	0.07	0.12	0.09	1

First row: Number of jurors by race, totalling 275

Second row: Proportion of population in a particular county in US by race, totaling 1

Design a χ^2 test to see whether or not the jurors selected are representative of the population in the county. Denote by T_n the test statistic for this test.

What is the number of degrees of freedom of the asymptotic distribution of T_n . In other words,

$$T_n \xrightarrow[n \rightarrow \infty]{(d)} \chi_\ell^2$$

for $l =$ ✓

Evaluate T_{275} on the given data set. (Answer accurate to 2 decimal places.)

$T_{275} =$ ✓

What is the p -value of this test?
(Answer accurate to 2 decimal places.)

You could use [this table](#) or software such as R to find the quantiles of a chi-squared distribution.)

p -value: ✓


You have used 2 of 4 attempts

✓ Correct (3/3 points)

Discussion

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