Brief Article

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Chapter 1

Testing Equality of two or more Proportions

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Solution 1.5-1

1. Significance test:

   Pearson's Chi-squared test

   data: mtxA X-squared = 1.6192, df = 2, p-value = 0.445

   Reviewing the results of the chi-square test, the test statistic ($\chi^2 = 1.6192$) and the p-value = 0.445 which is greater than 0.05, we conclude that there is no difference in GPA from students who live on-campus or off-campus.

2. column percents [,1] [,2] [1,] 26.41509 34.04255 [2,] 50.94340 38.29787 [3,] 22.64151 27.65957

   The on-campus group is most likely to have a high GPA.

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Solution 1.5-2

1. Significance test:

   Pearson's Chi-squared test

   data: mtxA X-squared = 13.983, df = 4, p-value = 0.007349

   Reviewing the results of the chi-square test, the test statistic ($\chi^2 = 13,983$) and the p-value = 0.007349 which is less than 0.05, we conclude that there is a difference in quality of life and level of satisfaction with the neighborhood.

2. column percents

	1	2	3
1	50.00	25.00	13.16
2	30.77	44.44	34.21
3	19.23	30.56	52.63

The quality of life group is most likely to have a high level of neighborhood satisfaction.