Table

Description automatically generated

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | National News | Sports | Comics | **Total** |
| City | 170 ev 154.779 | 124 ev 126.772 | 90 ev 102.449 | **384** |
| Suburb | 120 ev 141.075 | 130 ev 115.547 | 100 ev 93.378 | **350** |
| Rural | 130 ev 124.146 | 90 ev 101.684 | 88 ev 82.173 | **308** |
| **Total** | **420** | **344** | **278** | **1042** |

Expected Value = (Row total \* Column Total)/grand total

**A**

Chi Square Test of Independence:

Alpha = 0.05

Null Hypothesis: There **IS NOT** a relationship between type of community and section of newspaper first read

Alternative Hypothesis: There **IS** a relationship between type of community and section of newspaper first read

Text

Description automatically generated with low confidence

x^2 = 10.527576

degrees of freedom = (3-1)\*(3-1) = 4

Using a x^2 calculator and 4 degrees of freedom the P Value is 0.0324

Since the P Value < Alpha (0.0324<0.05) **reject the null hypothesis** and we can conclude that there is a 95% confident relationship between community and what section of the paper is read first

**B**

Largest Chi Squared is Suburban National News with a x^2 of 3.1483. This means that this has the largest difference between the observed value adjusted for things like relative size and positive and negative

**C**

The number of rural readers is higher than expected because the expected value is 124.1 versus the actual number being 130

**D**

The number of people who read comics in the city is less than expected because there were 102.4 people expected and only 90 readers

Table

Description automatically generated

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Outstanding | Good | Fair | Unsatisfying | **Total** |
| Hometown | 27 ev 24 | 35 e  5.72916667  v 30 | 33 ev 36 | 25 ev 30 | **120** |
| Not Hometown | 13 ev 16 | 15 ev 20 | 27 ev 24 | 25 ev 20 | **80** |
| **Total** | **40** | **50** | **60** | **50** | **200** |

Null Hypothesis: There is **not** a relationship between adjustment to civilian life after release and residence

Alternative Hypothesis. There **is** a relationship between adjustment to civilian life after release and residence

Alpha: 0.01

X^2 : 5.7291667

Degrees of Freedom = 3

p-val: 0.028503

Since the P value is greater than alpha, fail to reject null hypothesis and cannot conclude that adjustment to civilian life and residence after release are dependent