

1. Suppose that in a typical week the number of absences from a large high school was 805. About how many would you expect per day? How were the expected number of absences calculated? Explain your reasoning.

Mon	Tus	Wed	Thu	Fri	(Total)
					805

2. The school wants to see whether student absences are the same on different days of a randomly selected week of school. What would be the hypothesis for testing? Explain your answer.

Following table shows the number of observed absences per day of the week.

Mon	Tus	Wed	Thu	Fri	(Total)
173	157	138	149	188	805

3. How do the observed number of absences compare to your answer in question 1?

4. A chi-squared test statistic is found by summing the $\frac{(observed - expected)^2}{expected}$

4. A chi-squared test statistic is found by summing the $\frac{(observed - expected)^2}{expected}$ values. Because the differences (observed - expected) are squared, the answer will always be positive. Find the Chi-squared Test statistic for this example.

5. In the case of the chi-square test, the degrees of freedom is equal to the number of terms/outcomes used in calculating chi-square minus one. There were five terms in the chi-square for this problem - therefore, the degrees of freedom is four. You can find the critical value using Table or =CHISQ.INV.RT, or find p-value using =CHISQ.TEST.

Rules of making a decision to reject or fail to reject your null hypothesis are same with others. Explain what your conclusion means. Does your chi-square analysis support the hypothesis that student absences are the same on different days of a randomly selected week of school?

Part B

We have 50% males and female in our data. If gender is independent of our question about Dancing With The Stars, how many males should we expect to answer Yes to the question about Dancing With The Stars? Explain how did you get the answer, and fill in the rest of the table 1. Just in case if you don't know the show visit [this page](#) .

Table 1

	Yes, I watch Dancing With The Stars	No, I do not watch Dancing With The Stars	
Male			100
Female			100
	120	80	200

2. I did the survey the question. Table 2 showed the result from the survey, which we called "an observed values table." Table 1 represented the expected survey results if Gender wasn't a factor in people choosing to watch Dancing With The Stars, Table 2 is represented our actual survey results. What can you tell after comparing Table 1 with Table 2 (the observed value with the expected value)?

Table 2

	Yes, I watch Dancing With The Stars	No, I do not watch Dancing With The Stars	
Male	30	70	100
Female	90	10	100
	120	80	200

3. How do we determine the expected value like Table 1? What should we know?