

This family of models, like the Student's t-models, differs only in the number of degrees of freedom. The number of degrees of freedom for a goodness of fit test is $n - 1$. Here, however, n is not the sample size, but instead is the number of categories. For the Skittles example, we have 5 colors, so our χ^2 statistic has 4 degrees of freedom.

Look at the chi-square distributions below. Consult with your neighbor and write down as many observations as you can (nu = number of categories):

