Calculating and Interpreting Chi-Squared Statistics (KEY)

Answers:

1) Scenario 1 (Gender): Chi-Squared = 15.625

$$= \frac{(375-400)^2}{400} + \frac{(425-400)^2}{400} + \frac{(125-100)^2}{100} + \frac{(75-100)^2}{100}$$

Scenario 2 (Age): Chi-Squared = 0.625

$$= \frac{(405-400)^2}{400} + \frac{(395-400)^2}{400} + \frac{(95-100)^2}{100} + \frac{(105-100)^2}{100}$$

2) Gender is the more powerful differentiator

3) Gender yields the highest Chi-Squared value; this means it is responsible for the most difference in the gift/no gift decision among possible donors

4) Gender, since it has the higher Chi-Squared value, will also have the higher logworth value