

# Classroom Voting Questions: Elementary Statistics

## Inference for Two-Way Tables

1. In a  $2 \times 2$  table of the frequency of sexual intercourse by age, we observe a chi-square ( $\chi^2$ ) statistic of 2.5. What should be the conclusion?
  - (a) There is observed evidence that sex and age are associated.
  - (b) There is little observed evidence of anything but a chance association.
  - (c) It is not possible to obtain an observed chi-square statistic this large.
  - (d) It would be unlikely to obtain an observed chi-square statistic this large.
  - (e) No conclusion is appropriate without sample size information.
  
2. Two quantitative variables can be either (linearly) correlated or not (linearly) correlated. Fill in the blank with a roughly analagous more general dichotomy, a dichotomy that applies to both quantitative and qualitative variables: “correlated is to not correlated” as \_\_\_\_\_.
  - (a) “independent is to not independent”
  - (b) “associated is to not associated”
  - (c) “resistant is to not resistant”
  
3. TRUE or FALSE: Two quantitative variables that are not (linearly) correlated are independent.
  - (a) True, and I am very confident.
  - (b) True, and I am not very confident.
  - (c) False, and I am not very confident.
  - (d) False, and I am very confident.