

Classroom Voting Questions: Elementary Statistics

Inference for Two-Way Tables

1. In a 2×2 table of the frequency of sexual intercourse by age, we observe a chi-square (χ^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.