

Classroom Voting Questions: Elementary Statistics

Data Analysis for Two-Way Tables

1. The following contingency table/two-way table classifies the members of a certain government into political party (Liberal or Conservative) and whether they support or oppose the spending bill that is currently up for adoption.

	Support	Oppose	Total
Liberal	47	11	58
Conservative	14	35	49
Total	61	46	107

What fraction of the government members are conservatives who support the bill?

- (a) $\frac{14}{61}$
- (b) $\frac{14}{49}$
- (c) $\frac{14}{107}$
- (d) None of the above

2. The following contingency table/two-way table classifies the members of a certain government into political party (Liberal or Conservative) and whether they support or oppose the spending bill that is currently up for adoption.

	Support	Oppose	Total
Liberal	47	11	58
Conservative	14	35	49
Total	61	46	107

What fraction of the liberals support the bill?

- (a) $\frac{47}{61}$
- (b) $\frac{47}{58}$
- (c) $\frac{47}{107}$

(d) None of the above

3. The following contingency table/two-way table classifies the members of a certain government into political party (Liberal or Conservative) and whether they support or oppose the spending bill that is currently up for adoption.

	Support	Oppose	Total
Liberal	47	11	58
Conservative	14	35	49
Total	61	46	107

The following fractions are formed by dividing numbers in the table: $\frac{11}{58}$, $\frac{58}{107}$, $\frac{11}{107}$. In order, these numbers are part of which distributions?

- (a) joint, marginal, conditional
- (b) joint, conditional, marginal
- (c) marginal, joint, conditional
- (d) marginal, conditional, joint
- (e) conditional, joint, marginal
- (f) conditional, marginal, joint

4. Phoenix and Cassandra are professional basketball players who have dealt with injuries over the past two seasons. Two seasons ago, Phoenix made 5 out of 10 free throws, while Cassandra made 60 out of 100 free throws. Last season, Phoenix made 139 out of 200 free throws, while Cassandra made 7 out of 10 free throws. This leads to the two joint distributions below. (The first table is for two seasons ago; the second table is for last season.)

	Made	Missed
Phoenix	0.5	0.5
Cassandra	0.6	0.4

	Made	Missed
Phoenix	0.695	0.305
Cassandra	0.7	0.3

Which player was the best free-throw shooter?

- (a) Phoenix
- (b) Cassandra