

# 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.

	<b>Support</b>	<b>Oppose</b>	<b>Total</b>
<b>Liberal</b>	47	11	58
<b>Conservative</b>	14	35	49
<b>Total</b>	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.

	<b>Support</b>	<b>Oppose</b>	<b>Total</b>
<b>Liberal</b>	47	11	58
<b>Conservative</b>	14	35	49
<b>Total</b>	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.

	<b>Support</b>	<b>Oppose</b>	<b>Total</b>
<b>Liberal</b>	47	11	58
<b>Conservative</b>	14	35	49
<b>Total</b>	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.)

	<b>Made</b>	<b>Missed</b>
<b>Phoenix</b>	0.5	0.5
<b>Cassandra</b>	0.6	0.4

	<b>Made</b>	<b>Missed</b>
<b>Phoenix</b>	0.695	0.305
<b>Cassandra</b>	0.7	0.3

Which player was the best free-throw shooter?

- (a) Phoenix
- (b) Cassandra