MODULE 8 Multi-Variable Categorical Data

LESSON 8-1

Practice and Problem Solving: A/B

1.

Bag Containing:	Frequency
plastic	8
glass	6
metal	6

2.

Gender	Field Trip Preferences		
	Science	History	Total
Boys	46	56	102
Girls	54	44	98
Total	100	100	200

3.

Math	Science		
	Yes	No	Total
Yes	21	38	59
No	34	7	41
Total	55	45	100

4.

Dog	Cat		
	Yes	No	Total
Yes	0	100	100
No	62	38	100
Total	62	138	200

LESSON 8-2

Practice and Problem Solving: A/B

1. $\dfrac{25}{125}$ or 20%

2. $\dfrac{73}{125}$ or 58.4%

3. Calculate frequencies with a row total as the denominator.

   Likes reading and likes board games: $\dfrac{48}{73}$, about 0.658 or 65.8%

   Likes reading but does not like board games: $\dfrac{25}{73}$, about 0.342 or 34.2%

   Those who like reading are more likely to like board games.

4. Calculate frequencies with a column total as the denominator.

   Likes board games and likes reading: $\dfrac{48}{91}$, about 0.527 or 52.7%

   Likes board games but does not like reading: $\dfrac{43}{91}$, about 0.472 or 47.2%

   Those who like board games are more likely to like reading.

5. $\dfrac{15}{200}$ or 7.5%

6. Calculate frequencies with a row total as the denominator.

   Grade 9 and travels by bus: $\dfrac{64}{107}$, about 0.598 or 59.8%

   Grade 10 and travels by bus: $\dfrac{43}{93}$, about 0.462 or 46.2%

   Grade 9 students are more likely to travel by bus than not. Grade 10 students are more likely not to travel by bus.