


Interpreting Two-Way Frequency Tables

Use the data from each two-way frequency table to answer the questions.

1. At Crescent Valley Adventure Camp, Ms. Santos packs snacks and drinks for the campers to have during their day trips. Ms. Santos surveys a sample of campers about their preferred drink and day trip. She organizes the data in the two-way frequency table below.



	HIKING	KAYAKING	TOTAL
WATER	22	11	33
SPORTS DRINK	17	38	55
TOTAL	39	49	88

- a. Which drink is less popular among the campers surveyed who prefer hiking?

Sports drink

- b. Lia prefers water. Is it more likely that she prefers hiking or kayaking? Explain your answer.

Sample Answer: It is more likely Lia prefers

hiking. The data shows that among campers


who prefer water, more prefer hiking.

- c. Does the data support the following statement? Explain your answer. *It is likely that a camper who prefers kayaking also prefers water.*

Sample Answer: No, the data shows that campers who prefer kayaking are more likely to prefer

sports drinks.

2. Natasha, the owner of City Green Bike Share, collected data on the type and duration of bike rentals. She created the two-way frequency table below to represent the data.



	MOUNTAIN BIKE	ELECTRIC BIKE	TOTAL
ONE HOUR	8	85	93
HALF DAY	34	68	102
FULL DAY	68	32	100
TOTAL	110	185	295

- a. Which type of bike was more frequently rented for half of a day?

Electric bike

- b. Liam rented a bike from City Green Bike Share. Is it more likely that he rented a mountain bike or an electric bike? Explain your answer.

Sample Answer: It is more likely Liam rented an

electric bike. The data shows that electric bikes

were rented more frequently than mountain bikes.

- c. Does the data support the following statement? Explain your answer. *Most people who rented a mountain bike got a full-day rental.*


Sample Answer: Yes, the data shows that people who rented mountain bikes most frequently got

a full-day rental.

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Keep going! Use the data from each two-way frequency table to answer the questions.

- 3.** Mr. Lu is helping organize the back-to-school bash at Franklin Middle School. He is in charge of ordering food for the event. He surveys some students about their food preferences and records the data in the two-way frequency table below.



	TACOS	HOT DOGS	PIZZA	TOTAL
6TH GRADERS	19	16	16	51
7TH GRADERS	16	14	22	52
8TH GRADERS	12	15	23	50
TOTAL	47	45	61	153

- a.** Which food is the least popular among the 7th graders surveyed?

Hot dogs


- b.** James is in 8th grade at Franklin Middle School. Which food is he most likely to prefer? Explain your answer.

Sample Answer: It is most likely James prefers pizza. The data shows that pizza is the most popular food among 8th graders.

- c.** Mr. Lu can only buy two of the food options for the back-to-school bash. Which two food options would you recommend he choose? Explain your answer.

Sample Answer: I would recommend that he choose tacos and pizza. The data shows that those were the most popular food choices when you consider all three grades.

- 4.** The staff at the Greenwood Community Center is organizing a block party. They survey a random sample of community members to decide which types of music the DJ should play. Their data is shown in the two-way frequency table below.



	POP	RAP	JAZZ	ROCK	TOTAL
25 YEARS OLD AND UNDER	26	43	2	4	75
OVER 25 YEARS OLD	14	9	14	42	79
TOTAL	40	52	16	46	154

- a.** Which is the least popular type of music among the community members surveyed?

Jazz

- b.** Bo was surveyed. If he is 41 years old, which type of music is he most likely to prefer? Explain your answer.

Sample Answer: It is most likely Bo prefers rock. The data shows that most people surveyed who are over 25 years old prefer rock.

- c.** The majority of the people attending the block party will be 25 years old and under. Which type of music would you recommend the DJ play most often? Explain your answer.

Sample Answer: I would recommend that the DJ play rap most often. The data shows that rap is the type of music that most people surveyed who are 25 years old and under prefer.