



4-5 Additional Practice

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Leveled Practice In 1 and 2, complete the two-way relative frequency tables.

1. Eighty students were asked, "What is your favorite color?" The two-way frequency table shows the results of the survey. Complete the two-way relative frequency table to show the distribution of the data with respect to all 80 students. Round to the nearest tenth of a percent.

Two-Way Frequency Table

		Gender		
		Boys	Girls	Total
Favorite Color	Red	18	22	40
	Blue	10	14	24
	Green	10	6	16
	Total	38	42	80

Total Two-Way Relative Frequency Table

		Gender		
		Boys	Girls	Total
Favorite Color	Red	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
	Blue	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
	Green	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
	Total	<input type="text"/> %	<input type="text"/> %	100%

2. In a recent survey, 40 people were asked, "Do you like thunderstorms?" The two-way frequency table shows the results of the survey. Complete the row two-way relative frequency table to show the distribution of the data with respect to gender. Round to the nearest tenth of a percent.

Two-Way Frequency Table

		Like Thunderstorms?		
		Yes	No	Total
Gender	Men	12	10	22
	Women	10	8	18
	Total	22	18	40

Row Two-Way Relative Frequency Table

		Like Thunderstorms?		
		Yes	No	Total
Gender	Men	<input type="text"/> %	<input type="text"/> %	100%
	Women	<input type="text"/> %	<input type="text"/> %	100%
	Total	<input type="text"/> %	<input type="text"/> %	100%

3. Five hundred people in each of two cities were asked if they frequently use umbrellas. The row two-way relative frequency table shows the relative frequencies with respect to the people in each city. In which city do people use umbrellas less often? Explain.

Row Two-Way Relative Frequency Table

		Frequently Use an Umbrella?		
		Yes	No	Total
City	A	9%	91%	100%
	B	85%	15%	100%
	Total	47%	53%	100%



4. A researcher asked 85 students, "Do you prefer math or history?" The row two-way relative frequency table shows the relative frequencies with respect to the subject. Which subject is the students' favorite?

Row Two-Way Frequency Table

		Gender		
		Boys	Girls	Total
Subject	Math	57.9%	42.1%	100%
	History	42.6%	58.0%	100%
	Total	49.4%	50.6%	100%

5. **Higher Order Thinking** The same number of shoppers in two different stores at a mall were asked a survey question. The column two-way relative frequency table shows the relative frequencies with respect to the response.

Column Two-Way Relative Frequency Table

		Response		
		Yes	No	Total
Store	1	74%	34%	50%
	2	26%	66%	50%
	Total	100%	100%	100%

- a. Compare the percentages for those who responded "Yes."
- b. Is there evidence of an association between the response and the store at which shoppers were surveyed? Explain.

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6. The column two-way relative frequency table shows the relative frequencies of students with respect to their response about riding a bus to school.

Column Two-Way Frequency Table

		Ride a Bus?		
		Yes	No	Total
Students	Grade 7	47%	46%	46.5%
	Grade 8	53%	54%	53.5%
	Total	100%	100%	100%

PART A

What percent of students who do not ride a bus are seventh graders?

PART B

What percent of students who ride the bus are eighth graders?

