

Name _____ Date _____

She Blinded Me with Science! Relative Frequency Conditional Distribution

Vocabulary

Define the term in your own words.

- relative frequency conditional distribution

10

Problem Set

Complete the relative frequency conditional distribution for each two-way table.

1.

Grades of Students

		A	B	C	D	F
Class	Algebra	6	4	8	1	1
	Geometry	6	11	9	2	2
	Trigonometry	3	7	12	5	3

Grades of Students

		A	B	C	D	F	Total
Class	Algebra	$\frac{6}{20} = 30\%$	$\frac{4}{20} = 20\%$	$\frac{8}{20} = 40\%$	$\frac{1}{20} = 5\%$	$\frac{1}{20} = 5\%$	$\frac{20}{20} = 100\%$
	Geometry	$\frac{6}{30} = 20\%$	$\frac{11}{30} \approx 36.7\%$	$\frac{9}{30} = 30\%$	$\frac{2}{30} \approx 6.7\%$	$\frac{2}{30} \approx 6.7\%$	$\frac{30}{30} = 100\%$
	Trigonometry	$\frac{3}{30} = 10\%$	$\frac{7}{30} \approx 23.3\%$	$\frac{12}{30} = 40\%$	$\frac{5}{30} \approx 16.7\%$	$\frac{3}{30} = 10\%$	$\frac{30}{30} = 100\%$

2.

Grades of Students

		A	B	C	D	F
Class	Computer Programming	7	13	12	1	2
	Journalism	8	11	4	1	0
	Cinematography	15	9	8	1	0

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Grades of Students

		A	B	C	D	F	Total
Class	Computer Programming						
	Journalism						
	Cinematography						

3.

Student's Choice of Shakespeare Play to Study

		Hamlet	Macbeth	King Lear	Othello
Class	Class A	9	10	13	5
	Class B	14	8	7	8

Student's Choice of Shakespeare Play to Study

		Hamlet	Macbeth	King Lear	Othello
Class	Class A				
	Class B				
	Total				

Name _____ Date _____

4. Student's Choice of Musical to Perform

		Carousel	South Pacific	The King and I	The Sound of Music
Class	Class A	8	5	14	9
	Class B	11	8	12	4

Student's Choice of Musical to Perform

		Carousel	South Pacific	The King and I	The Sound of Music
Class	Class A				
	Class B				
	Total				

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5. Favorite Lunch Item of Students

		Pizza	Salad	Chicken	Burger
Class	Class A	12	3	10	8
	Class B	9	8	13	5
	Class C	7	9	7	12

Favorite Lunch Item of Students

		Pizza	Salad	Chicken	Burger	Total
Class	Class A					
	Class B					
	Class C					

6. Favorite Gym Activity of Students

		Volleyball	Basketball	Softball	Flag Football
Class	Class A	9	10	4	12
	Class B	12	5	7	6
	Class C	9	3	14	6

Favorite Gym Activity of Students

		Volleyball	Basketball	Softball	Flag Football	Total
Class	Class A					
	Class B					
	Class C					

10

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The relative frequency conditional distribution shows the sports that female and male students choose to participate in. Use the relative frequency conditional distribution to answer each question.

Favorite Sports of Students

		Basketball	Soccer	Track & Field	Swimming	Total
Class	Female Students	$\frac{18}{85} \approx 21.2\%$	$\frac{14}{85} \approx 16.5\%$	$\frac{22}{85} \approx 25.9\%$	$\frac{31}{85} \approx 36.5\%$	$\frac{85}{85} = 100\%$
	Male Students	$\frac{24}{97} \approx 24.7\%$	$\frac{19}{97} \approx 19.6\%$	$\frac{20}{97} \approx 20.6\%$	$\frac{34}{97} \approx 35.1\%$	$\frac{97}{97} = 100\%$

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7. What percent of female students participate in track & field?
Of the female students, 25.9% participate in track & field.

8. What percent of male students participate in basketball?

9. Which sport is the most popular among female students?

10. Which sport is the least popular among male students?

11. Which sport is the least popular among female students?

12. Which sport is the most popular among male students?