

TWO WAY FREQUENCY TABLES

Examples: Two-Way Frequency Table (Bivariate data)

1) You survey friends about the type of party they enjoy most.

Gender

	Male	Female	Total	
Party Type	Bowling	6	2	8
Skating	3	11	14	
Dancing	1	3	4	
Total	10	16	26	

What type of party would you plan for them? Explain

2) Eighth grade students were asked whether they participate in an after-school activity. Complete the two-way frequency table below.

After-school Activity

	Yes	No	Total
Gender	Male	40	
Female			95
Total	102		187

- 3) Sagamore students were polled about whether or not they owned an I-POD. The results of the **Relative Percentage** are shown below in percentage form. Complete the chart below.

I-POD

Grade	Yes	No	Total
7 th	42%		75%
8 th			
Total	55%		100%

- a. Did more students have I-Pods or not?

- b. If there were a total of 88 students, how many were 8th Graders?

- 4) The chart below represents the **Relative Frequency** of people who own an I-Pod. Complete the two-way frequency table.

I-POD

	Yes	No	Total
Students	.51		.70
Adults	.27		
Total			1.00

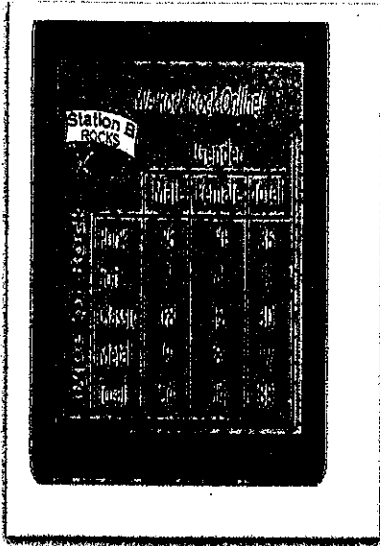
Creating a **Relative Frequency** table based on TOTAL people.

- 5) Below is a table of people in the park and the activities that they do. Complete the relative frequency table below, based on the total participants. First, complete the table.

Activity	Jog	Fly Kites	Picnic	Total
Male	9	4	10	
Female	11	1		
Total			25	50

To create a relative-frequency two-way table for all 50 people, divide each number in each cell by 50

Topping	Jog	Fly Kites	Picnic	Total
Male				
Female				
Total				



- 1) a) What is the most popular type of rock among men and woman? _____
- b) What type of rock do females like the most? _____
- c) What is the least favorite rock for men? _____
- d) How many people were surveyed? _____
- e) For which gender was the response greater? _____

2) You go to a dance and help clean up afterwards. To help, you collect the soda cans, Coca-Cola and Sprite, and organize them. Some cans were on the table and some were in the garbage. Seventy-two total cans were found. 42 total cans were found in the garbage and fifty total cans were Coca-Cola. 14 Sprite cans were found on the table. Complete the two-way frequency chart.

		Coca-Cola	Sprite	Total
Party Type	Table			
	Garbage			
	Total			

3) Now, complete a relative frequency table based on the TOTAL number of cans.

		Coca-Cola	Sprite	Total
Table				
Garbage				
Total				

4) Below is a partial list of the relative frequency table of the results of a classroom poll. Complete the chart.

STUDY FOR THE TEST

	Yes	No	Maybe	Total
Boys	.25	.15		.56
Girls			.09	
Total	.52	.16		1.00

- 4a) If there were a total of 50 students, how many said YES, they will study for the test. _____
- 4b) If there were a total of 50 students, how many GIRLS said MAYBE? _____

- 1) Eighth grade students were asked whether they participate in an after-school activity. Complete the two-way frequency table below.

		After-school Activity		
		Yes	No	Total
Gender	Male		40	
	Female			95
	Total	102		187

- 2) Eighty students at Sagamore Middle school were surveyed whether they own an I-Pod. Half of the 50 eighth graders said yes, and 28 of the seventh graders said yes. Complete the two-way frequency table.

	Yes	No	Total
7 th Grade			
8 th Grade			
Total			

- 3) The table shows the results of a survey about what the engineers said their favorite subject was in middle school.

	Math	Science	Total
Electrical	85	90	175
Chemical	80	91	171
Mechanical	89	81	170
Total	254	262	516

- a) How many chemical engineers chose science? _____
- b) How many engineers chose math? _____
- c) Overall, what was the favorite subject of all engineers? _____

- 4) A survey of students in a homeroom class explored the relationship between gender and participation in the school band.

	Boys	Girls	Total
In Band	4	8	12
Not in Band	9	5	14
Total	13	13	26

Which is a reasonable conclusion to draw from these data?

- A) There are more band members in the class than non-band members.
- B) There are more boys in the class than girls.
- C) Among the boys, there are more boys in the band than Not in the band.
- D) More than one-half of the band members in the class are girls.

- 5) A survey of randomly selected Sagamore students explored the relationship between gender and video game play. Which is not a reasonable interpretation of the data?

	Boys	Girls	Total
Play Daily	45	12	57
Do Not Play Daily	5	38	43
Total	50	50	100

- A) More boys surveyed play video game daily than girls.
 B) Ignoring gender, a little more than half of the students surveyed play video games daily
 C) Of the boys surveyed, 5% do not play video games daily
 D) Of the girls surveyed, exactly 24% play video games daily
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- 6) The following two-way table shows the number of students who voted for each of the two candidates for class president, by grade.

Candidate	Grade 7	Grade 8	Grade 9
Zoe	45	20	65
Alessandro	30	60	90
Total	75	80	155

How many more 8th graders voted for Alessandro than Zoe?

- A) 15 B) 20 C) 40 D) 80
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- 7) The following two-way table shows the number of different color cars and SUV's at an auto dealership.

Color	Car	SUV	Total
Red	25	15	40
White	15	10	25
Blue	40	20	60
Green	20	5	25
Total	100	50	150

What color is the least popular car in the dealership?

- A) White B) Red C) Green D) Blue