

Math II

Frequency Tables

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 AND a relative frequency chart

Two Way Frequency

	Coca-Cola	Sprite	Total
Table	16	14	30
Garbage	34	8	42
Total	50	22	72

Relative Frequency

	Coca-Cola	Sprite	Total
Table	0.22	0.20	0.42
Garbage	0.47	0.11	0.58
Total	0.69	0.31	1.00

Blue = given info

Red = had to calculate

The students in a seaside school are to have extra swimming lessons if they cannot swim. The table below gives information about the students in grades 7, 8 and 9.

Two Way Frequency

	Can swim	Cannot swim	Total
Grade 7	120	60	180
Grade 8	168	11	179
Grade 9	172	3	175
Total	460	74	534

Relative Frequency

	Can swim	Cannot swim	Total
Grade 7	0.23	0.11	0.34
Grade 8	0.31	0.02	0.34
Grade 9	0.32	0.01	0.33
Total	0.86	0.14	1.00

- Complete the table
- How many students need swimming lessons?
- How many students are there in 8th grade?
- How many of the 7th grade students cannot swim?
- How many students in grades 7 and 8 can swim?
- How many students are there altogether in grades 7, 8, and 9?
- Create a two-way relative frequency table for the above data.
- What is the relative frequency of students who are in 8th grade and cannot swim?
- What percentage of 9th grade students can swim?
- What percentage of students cannot swim?
- What percentage of students are 9th graders?

Put Solutions Here

b. 74
 c. 179
 d. 60

e. 288
 f. 534
 g. ~~~~~
 h. 0.02

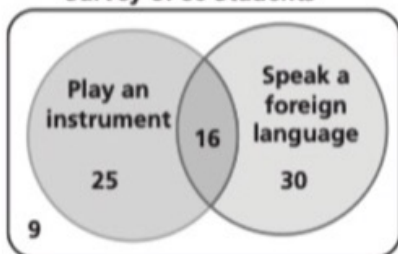
i. 32%
 j. 14%
 k. 33%

Math II

Frequency Tables

The Venn diagram shows the results of a survey in which 80 students were asked whether they play a musical instrument and whether they speak a foreign language. Use the Venn diagram to complete the two-way table. Then use the two-way table to answer each question.

Survey of 80 Students



	Play an Instrument	Do Not Play an Instrument	Total
Speak a Foreign Language	16	30	46
Do Not Speak a Foreign Language	25	9	34
Total	41	39	80

- a. How many students play an instrument?
41
- b. How many students speak a foreign language?
46
- c. How many students play an instrument and speak a foreign language?
16
- d. How many students do not play an instrument and do not speak a foreign language?
9
- e. How many students play an instrument and do not speak a foreign language? 25

Hamster Election Results 2020 Use the voter data in the table below to answer the questions that follow.

	McWhiskers	Twitchnose	Liam	Total
Furr-Ball City	34	43	90	167
Squiggle Town	78	47	23	148
Vermin Village	52	45	51	148
Total	164	135	164	463

M = Voted to for McWhiskers T = Voted to for Twitchnose L = Voted to for Liam

F = Lives in Furr-Ball City S = Lives in Squiggle Town V = Lives in Vermin Village

Find the Probabilities of the following events. State your answers as Fractions and Percents.

$$P(S) = \frac{148}{463} \approx 32\%$$

$$P(F \cap M) = \frac{34}{463} \approx 7\%$$

$$P(F|L) = \frac{90}{164} \approx 55\%$$

$$P(\bar{V}) = \frac{315}{463} \approx 68\%$$

$$P(T \cup L) = \frac{298}{463} \approx 64\%$$

$$P(L|F) = \frac{90}{167} \approx 54\%$$

$$P(T) = \frac{135}{463} \approx 29\%$$