

1. Change $\frac{5}{6}$ to a decimal

$$\begin{array}{r} 0.8\overline{33} \\ 6 \overline{) 5.000} \\ \underline{4} \\ 10 \\ \underline{18} \\ 20 \\ \underline{18} \\ 20 \\ \underline{18} \\ 2 \end{array}$$

2. Change your answer from #1 to a percent

$$0.8\overline{33} = 83.\overline{3}\%$$

Frequency Tables

Relative Frequency - The amount something happens in comparison to other events. Always given as a percent.
(part/total)

The data from 50 students is shown in the following two-way table. The students were asked whether or not they were taking a foreign language and whether or not they were taking a sport. The following two-way table shows this data.

	Play a Sport	Do Not Play a Sport	Total
Take a Foreign Language	14	23	37
Do Not Take a Foreign Language	10	3	13
Total	24	26	50

Relative Frequencies

	Play a Sport	Do Not Play a Sport	Total
Take a Foreign Language	$\frac{14}{37} \ 28\%$	46%	74%
Do Not Take a Foreign Language	20%	6%	26%
Total	48%	52%	100%

Examples:

1. What is the relative frequency of students that take a foreign language and play a sport to all students taking a foreign language?

$$\frac{14}{37} = .378 \quad 38\%$$

2. What is the relative frequency of students that neither play a sport nor take a foreign language to all students that do not play a sport?

$$\frac{3}{26} = .115 \quad 12\%$$

A class was surveyed about whether they have been to Canada or Mexico. The following two-way table shows this data.

	Have Been to Canada	Have Not Been to Canada	Total
Have Been to Mexico	6	3	9
Have Not Been to Mexico	5	11	16
Total	11	14	25

Relative Frequencies

	Have Been to Canada	Have Not Been to Canada	Total
Have Been to Mexico	24%	12%	36%
Have Not Been to Mexico	20%	44%	64%
Total	44%	56%	100%

Practice: What is the relative frequency of a student who has been to both Canada and Mexico to all students that have been to Mexico?

$$\frac{6}{9} = 67\%$$

100 students were surveyed about a class they would rather take in high school.

	Male	Female
Band	12	21
Chorus	15	17
Yearbook	28	7

Total How many total females are there?

33 45

32 How many total kids take band?

35 33

Total 55 45 100

What is the relative frequency of students who are male and in band compared to all students?

$$\frac{12}{100} = 12\%$$

What is the relative frequency of students who are female and in choir compared to all the females surveyed?

$$\frac{17}{45} = .377 \quad 38\%$$