

Name:

Date:

Reading 3.1

Relative Frequency Tables

Defining Frequency and Frequency Tables

Frequency means the number of times or occurrences of a repeating event or choice per unit of time. A **frequency distribution table** shows how often something happens. Let's take a look at an example.

Game Consoles Owned	Number
Nintendo 3DS	20
PlayStation 4	13
Xbox 360	10
Nintendo Switch	7
Total	50

The above is an example of a **frequency table**. With this table, we can see how many people own each type of game console.

Relative Frequency Distribution

With **relative frequency distribution** we do not want to know the number of people who selected a certain option, or the count. Instead, we want to know the **percentages**. In other words, what **percentage** of people own a specific game console.

Game Consoles Owned	Number	Relative Frequency
Nintendo 3DS	20	0.4
PlayStation 4	13	0.26
Xbox 360	10	0.2
Nintendo Switch	7	0.14
Total	50	1

So how do we figure out the relative frequency? Our total relative frequency (the number at the bottom) must add up to 1 (or 100%). To figure out the relative frequency, we count the total number of items. We then divide the count (or the frequency) by the total number.

An example of this is with those who own the Nintendo 3DS. The frequency is 20. We divide 20 by 50 to get the relative frequency of 0.4 or 40%.

Once we have figured out the relative frequencies, we can go back and double check to ensure our relative frequencies are correct. If our relative frequencies add up to 1, then we know our math is correct. If they do not add up to 1, or they add up to more than 1, then we need to go back and check our calculations.

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Activity 3.3 A

Relative Frequency Tables

The Missing Relative Frequencies:

Calculate the missing relative frequencies for each chart below.

Car Brands Owned	Number	Rel. Fre.
Nissan	18	0.257
Toyota	12	
Honda	20	0.285
Kia	7	0.1
Ford	13	
Total	70	

Favourite Seasons	Number	Rel. Fre.
Spring	20	
Summer	15	0.194
Fall	23	
Winter	13	0.168
None	6	0.08
Total	77	

Think About It:

When looking at a relative frequency chart, before calculating the relative frequencies, can we tell which numbers or categories will have the highest relative frequency?

Calculating Relative Frequencies:

Calculate the relative frequencies for each given chart below.

Sandwiches Sold	Number	Rel. Fre.
Monday	30	
Tuesday	18	
Wednesday	22	
Thursday	15	
Friday	25	
Total		

Heights of Friends	Number	Rel. Fre.
160 cm	8	
165 cm	4	
170 cm	6	
175 cm	2	
180 cm	5	
Total		