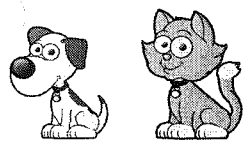


Part 1: Copy the table from on the class's data on the board.



What's your favorite pet?



Gender	Preferred Pet			Total
	Dog	Cat	Other	
Girl				
Boy				
Total				

- By organizing data in tables, raw data can be become more than just a list.
- Above, this is an example of a _____ which lists the frequencies of paired values from a data set of two _____
- _____ is data that _____
 - In our example, the two categorical values being compared are _____.
- What are some conclusions you can draw from the two-way table above?

Part 2: Relative Frequencies

Categorical data can be interpreted as _____

Preferred Pet	Dog	Cat	Other	Total
Frequency				

- What types of numbers can you use to write relative frequencies?
- List the frequencies from the table in descending order.
- What does the denominator refer to?

There are two types of relative frequencies found using a relative frequency table.

1. _____

2. _____

Find the relative frequencies for each cell. Interpret each cell.

Gender	Preferred Pet			Total
	<i>Dog</i>	<i>Cat</i>	<i>Other</i>	
<i>Girl</i>	Joint relative frequency:	Joint relative frequency:	Joint relative frequency:	Marginal relative frequency:
<i>Boy</i>	Joint relative frequency:	Joint relative frequency:	Joint relative frequency:	Marginal relative frequency:
Total	Marginal relative frequency:	Marginal relative frequency:	Marginal relative frequency:	

Part 3: Conditional Relative Frequency

1. Finally, a _____

a. Find the conditional relative frequency that a person prefers cats, given that the person is a girl.

How to interpret conditional relative frequency

○

b. Find the conditional that a student chose other, given that the person is a boy.

Example



Gather data as a class, and complete the table in your groups.

Gender	This morning's breakfast			Total
	Cereal	Not cereal	Did not eat breakfast	
Girl				
Boy				
Total				

Answer the question, using the frequencies to justify your answer in your response.

- How many more girls than boys ate cereal for breakfast?
- Do more students eat breakfast or do not eat breakfast?
- Do more students eat cereal or do not eat cereal?
- Which gender do we have more of in this class?

Create a relative frequency table based on our cereal two-way table.

Breakfast	Cereal	Not cereal	None	Total
Frequency				

5. Form two conclusions based on the data in the relative frequency table.

Find the relative frequencies of each cell.

Gender	This morning's breakfast			Total
	Cereal	Not cereal	Did not eat breakfast	
Girl				
Boy				
Total				

6. Find the joint relative frequency of students surveyed who are boys who did not eat breakfast.
7. What is the marginal relative frequency of students surveyed who eat cereal for breakfast?
8. Find the conditional relative frequency that a person is a boy, given that the person did not eat cereal for breakfast.
9. Find the conditional relative frequency that a person did not eat cereal for breakfast, given that person is a boy.
10. Describe what portion of the group the following marginal frequency describes:

Exit Ticket: How can a two-way table be used?

**Create your own survey with your own two-way table.
You do not have to use all columns (or you could use more).**

- Identify your two categorical variables:

Two-way Table

Relative Frequency Table

Conditional Relative Frequency Table

- Identify and describe what each joint relative frequency stands for:

- Identify and describe what each marginal relative frequency stands for:

