

# TWO-WAY TABLES

Two-way tables	
Categorical variable	
Frequency	

In the table below **circle** the **first** thing that comes to mind when you see the pictures. No talking. No changing your answer.

Man Playing A Sax Silhouette	Skull Woman at a Table	Write a number...	Rabbit Duck
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Rabbit or Duck  
Two Way Table:

	Girls	Boys	Total
Rabbit			
Duck			
Total			

- 1) How many girls saw a rabbit?
- 2) How many boys saw a duck?
- 3) What fraction of the class saw a rabbit?
- 4) What fraction of the class saw a duck?

## Example 1:

Felipe surveyed students at his school. His results are listed below:  
He found that 78 students own a cell phone and 57 of those students own an MP3 player.  
There are 13 students that do not own a cell phone, but own an MP3 player.  
Nine students do not own either device.



Construct a two-way frequency table summarizing the data.

- 1) How many students own a cell phone AND an MP3 player? \_\_\_\_\_
- 2) How many students own a cell phone but DO NOT own an MP3 Player? \_\_\_\_\_
- 3) How many students own a cell phone? \_\_\_\_\_
- 4) How many students do not own a cell phone AND own an MP3 Player? \_\_\_\_\_
- 5) How many students do not own either device? \_\_\_\_\_
- 6) How many students do not own a cell phone? \_\_\_\_\_
- 7) How many students own an MP3 Player? \_\_\_\_\_
- 8) How many students do NOT own an MP3 Player? \_\_\_\_\_
- 9) How many students did Felipe survey? \_\_\_\_\_



	MP3 Player	No MP3 Player	Total
Cell Phone	1)	2)	3)
No Cell Phone	4)	5)	6)
Total	7)	8)	9)

**Example 2:**

Use data collected from your class to complete the two-way table below.

- 1) \_\_\_\_\_ How many students in your class were born in NC?
- 2) \_\_\_\_\_ How many of the students born in NC **have** been to Disney World?
- 3) \_\_\_\_\_ How many students in your class were **not born** in NC?
- 4) \_\_\_\_\_ How many of the students not born in NC have visited Disney World?

	Born in NC	Not Born in NC	Total
Visited Disney World			
Not Visited Disney World			
Total			

- 5) Complete the remainder of the table using the data you have gathered from questions 1-4.
  - How many students have visited Disney World?
  - How many students have NOT visited Disney World?
  - How many students born in NC have NOT visited Disney World?
  - How many students not born in NC have NOT visited Disney World?
  - How many students are in your class?
- 6) What percentage of the class was born in NC?
- 7) What percentage of the class has been to Disney World?
- 8) What percentage of the class was born in NC **AND** has been to Disney World?