

# STATISTICS

## A STATING THE PROBLEM

### A.1 FINDING POPULATIONS

**MCQ 1:** You're studying how long kids play outside each day. Your question is: **"How many hours do kids spend playing outside each day?"**

Which population is best to study?

Check the correct answer:

- ☐ "All adults in a city."
- ☐ "All kids in a school."
- ☐ "All dogs in a neighborhood."
- ☐ "All teachers in a country."

**MCQ 2:** You're studying pets in homes. Your question is: **"How many families own a pet in our town?"**

Which population is best to study?

Check the correct answer:

- ☐ "All kids in a playground."
- ☐ "All birds in a forest."
- ☐ "All workers in a factory."
- ☐ "All families in our town."

**MCQ 3:** You're studying reading habits. Your question is: **"How many books do students borrow from the school library each month?"**

Which population is best to study?

Check the correct answer:

- ☐ "All librarians in a state."
- ☐ "All students in a school."
- ☐ "All books in a bookstore."
- ☐ "All parents in a neighborhood."

**MCQ 4:** You're studying nature. Your question is: **"How tall are the oak trees in a national park?"**

Which population is best to study?

Check the correct answer:

- ☐ "All oak trees in a national park."
- ☐ "All rivers in a country."
- ☐ "All clouds in the sky."
- ☐ "All rocks on a mountain."

### A.2 SORTING DATA TYPES

**MCQ 5:** What type of data is: favorite subject (e.g., Maths, Science, English)?

- ☐ Quantitative variable
- ☐ Qualitative variable

**MCQ 6:** What type of data is: number of siblings?

- ☐ Quantitative variable
- ☐ Qualitative variable

**MCQ 7:** What type of data is: type of vehicle (e.g., car, bicycle, bus)?

- ☐ Quantitative variable
- ☐ Qualitative variable

**MCQ 8:** What type of data is: height of students (in cm)?

- ☐ Quantitative variable
- ☐ Qualitative variable

**MCQ 9:** What type of data is: level of education (e.g., high school, bachelor's, master's)?

- ☐ Quantitative variable
- ☐ Qualitative variable

**MCQ 10:** What type of data is: annual income (in dollars)?

- ☐ Quantitative variable
- ☐ Qualitative variable

### A.3 WRITING A SURVEY QUESTION

**Ex 11:** Write a survey question about music that would enable you to collect numerical data.

**Ex 12:** Write a survey question about music that would enable you to collect categorical data.

**Ex 13:** Write a survey question about food that would enable you to collect categorical data.

**Ex 14:** Write a survey question about food that would enable you to collect numerical data.

## A.4 COMPLETING FREQUENCY TABLES

**Ex 15:** The class took the temperature at lunchtime for 20 days:

19°C, 18°C, 19°C, 20°C, 19°C, 20°C, 20°C, 20°C,  
19°C, 18°C, 20°C, 19°C, 20°C, 19°C, 18°C, 20°C,  
18°C, 17°C, 19°C, 20°C

Complete the table to show how many times each temperature happened:

Temperature (°C)	Frequency
17	
18	
19	
20	

**Ex 16:** The class recorded the number of siblings for 20 students:

1, 2, 1, 0, 1, 2, 2, 3, 1, 0,  
2, 1, 3, 1, 0, 2, 1, 0, 2, 1

Complete the table to show how many times each number of siblings happened:

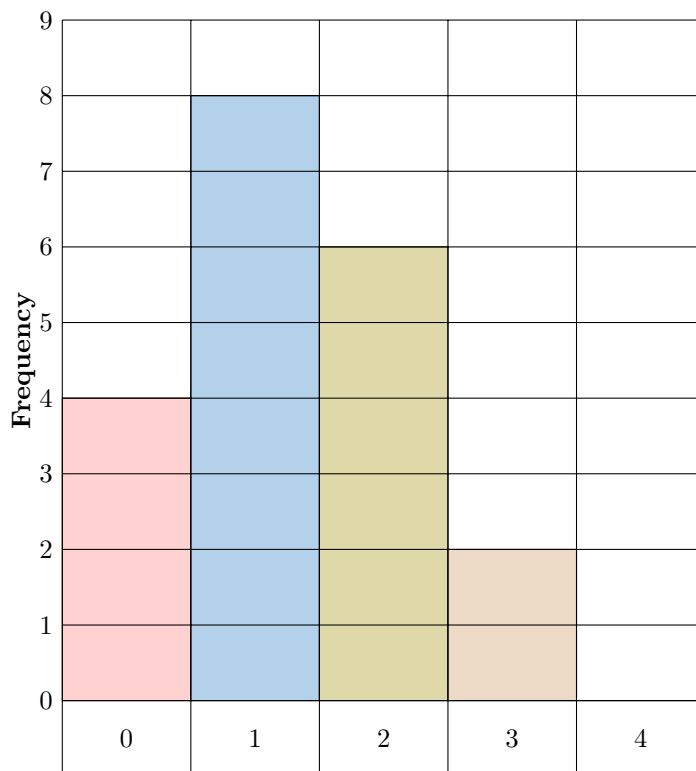
Number of Siblings	Frequency
0	
1	
2	
3	

**Ex 17:** Count the vowels (a, e, i, o, u) in this sentence: "I love Mathematics. It is so fun to solve problems and discover cool patterns."

Complete the table:

Vowel	a	e	i	o	u
Frequency					

Number of Siblings



How many students have 2 siblings?

students

Which number of siblings is the most common?

- ☐ 0  
☐ 1  
☐ 2  
☐ 3  
☐ 4

Which number of siblings is the least common?

- ☐ 0  
☐ 1  
☐ 2  
☐ 3  
☐ 4

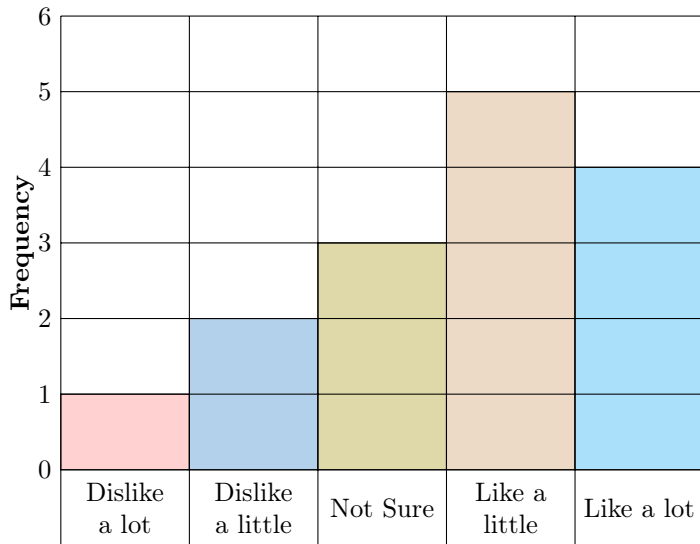
## B REPRESENTING DATA

### B.1 INTERPRETING BAR CHARTS

**Ex 18:** In his class, Hugo asks the students: "How many siblings do you have?"  
He represents the result with a bar chart:

**Ex 19:** In his class, Hugo asks the students: "How much do you like playing board games?"  
He represents the result with a bar chart:

**Liking Board Games**



How many students got a B mark?

students

Which mark is the most common?

- ☐ A
- ☐ B
- ☐ C
- ☐ D
- ☐ E

Which mark is the least common?

- ☐ A
- ☐ B
- ☐ C
- ☐ D
- ☐ E

How many students like playing board games "Not Sure"?

students

Which feeling is the most common?

- ☐ Dislike a lot
- ☐ Dislike a little
- ☐ Not Sure
- ☐ Like a little
- ☐ Like a lot

Which feeling is the least common?

- ☐ Dislike a lot
- ☐ Dislike a little
- ☐ Not Sure
- ☐ Like a little
- ☐ Like a lot

**Ex 20:** In his class, Hugo asks the students: "What mark did you get in your last exam?"

He represents the result with a bar chart:

**Exam Marks**

