STATISTICS

A COLLECTING DATA

A.1 TALLYING DATA

Ex 1: In his class, Hugo asks the students: "Do you have a sibling?"
The results are: Yes, No, Yes, Yes, Yes, No, No, Yes, Yes, Yes, No.
Complete the table

Sibling	Total
Yes	7
No	4

Answer: To find the totals, count the number of "Yes" and "No" responses from the list: Yes, No, Yes, Yes, Yes, No, No, Yes, Yes, Yes, No.

- "Yes" responses: There are 7 "Yes" (Yes, Yes, Yes, Yes, Yes, Yes, Yes).

- "No" responses: There are 4 "No" (No, No, No, No).

Ex 2: In his class, Léo asks the students: "Do you prefer playing indoors or outdoors during recess?"
The results are: Outdoors, Indoors, Outdoors, Indoors, Outdoors, Outdoors, Indoors, Outdoors, Indoors, Outdoors.
Complete the table

Preference	Total
Outdoors	6
Indoors	4

Answer: To find the totals, count the number of "Outdoors" and "Indoors" responses from the list: Outdoors, Indoors, Outdoors, Indoors, Outdoors, Outdoors, Indoors, Outdoors, Indoors, Outdoors.

- "Outdoors" responses: There are 6 "Outdoors" (Outdoors, Outdoors, Outdoors, Outdoors, Outdoors, Outdoors).

- "Indoors" responses: There are 4 "Indoors" (Indoors, Indoors, Indoors, Indoors).

Ex 3: In her class, Clara asks the students: "Do you like to eat vegetables for lunch?"
The results are:

- **Yes**: Emma, Noah, Lila, Tom.

- **No**: Mia, Leo, Sam.

Complete the table

Preference	Total
Yes	4
No	3

Answer: To find the totals, count the number of students for "Yes" and "No" from the list: Yes: Emma, Noah, Lila, Tom. No: Mia, Leo, Sam.

- "Yes" responses: There are 4 students (Emma, Noah, Lila, Tom).

- "No" responses: There are 3 students (Mia, Leo, Sam).

Ex 4: In her class, Clara asks the students: "What is your favorite pet?"
The results are:

- **Cat**: Emma, Noah, Lila.

- **Dog**: Tom, Mia, Leo, Sam.

- **Reptile**: Zoe, Ben.

Complete the table

Pet	Total
Cat	3
Dog	4
Reptile	2

Answer: To find the totals, count the number of students for "Cat," "Dog," and "Reptile" from the list: Cat: Emma, Noah, Lila. Dog: Tom, Mia, Leo, Sam. Reptile: Zoe, Ben.

- "Cat" responses: There are 3 students (Emma, Noah, Lila).

- "Dog" responses: There are 4 students (Tom, Mia, Leo, Sam).

- "Reptile" responses: There are 2 students (Zoe, Ben).

Ex 5: In her class, Clara asks the students: "What is your favorite color?"
The results are:

- **Red**: Emma, Tom, Zoe.

- **Blue**: Noah, Mia, Leo, Sam.

- **Yellow**: Lila, Ben.

Complete the table

Color	Total
Red	3
Blue	4
Yellow	2

Answer: To find the totals, count the number of students for "Red," "Blue," and "Yellow" from the list: Red: Emma, Tom, Zoe. Blue: Noah, Mia, Leo, Sam. Yellow: Lila, Ben.

- "Red" responses: There are 3 students (Emma, Tom, Zoe).

- "Blue" responses: There are 4 students (Noah, Mia, Leo, Sam).

- "Yellow" responses: There are 2 students (Lila, Ben).

A.2 CONDUCTING SIMPLE SURVEYS

Ex 6: In his class, Hugo asks the students: "What is your favorite pet?"

Complete the table

Pet	Number of Students	Total
Cat	||||	4
Dog	ⅢⅠ	6
Reptile	||	2

How many students are asked?

$$\boxed{12}\ \text{students}$$

Which pet is the most popular?

$$\boxed{\textbf{Dog}}$$

Answer:

- To find the total number of students asked, add the number of students for each pet:

$$4\,(\text{Cat}) + 6\,(\text{Dog}) + 2\,(\text{Reptile}) = 12\,\text{students}$$

  So, 12 students are asked, which matches 12 students.

- The most popular pet is the one with the highest number of students. The dog has 6 students, which is more than the cat (4 students) and the reptile (2 students). So, the dog is the most popular pet.

Ex 7: In her class, Lia asks the students: "What is your favorite color?"

Complete the table

Color	Number of Students	Total
Red	|||	3
Blue	ⅢⅠ	5
Green	||||	4

How many students are asked?

$$\boxed{12}\ \text{students}$$

Which color is the most popular?

$$\boxed{\textbf{Blue}}$$

Answer:

- To find the total number of students asked, add the number of students for each color:

$$3\,(\text{Red}) + 5\,(\text{Blue}) + 4\,(\text{Green}) = 12\,\text{students}$$

  So, 12 students are asked, which matches $\boxed{12}$ students.

- The most popular color is the one with the highest number of students. Blue has 5 students, which is more than Red (3 students) and Green (4 students). So, Blue is the most popular color.

Ex 8: In her class, Mia asks the students: "What is your favorite fruit?"

Complete the table

Fruit	Number of Students	Total
Apple	ⅢⅠ	5
Orange	||	2
Banana	|||	3

How many students are asked?

$$\boxed{10}\ \text{students}$$

Which fruit is the most popular?

$$\boxed{\textbf{Apple}}$$

Answer:

- To find the total number of students asked, add the number of students for each fruit:

$$5\,(\text{Apple}) + 2\,(\text{Orange}) + 3\,(\text{Banana}) = 10\,\text{students}$$

  So, 10 students are asked, which matches $\boxed{10}$ students.

- The most popular fruit is the one with the highest number of students. The apple has 5 students, which is more than the orange (2 students) and the banana (3 students). So, the apple is the most popular fruit.

Ex 9: In her class, Zoé asks the students: "Who do you vote for as class representative?"

Complete the table

Candidate	Number of Votes	Total
Emma	ⅢⅠ	6
Liam	||||	4
Noah	|||	3

How many students voted?

$$\boxed{13}\ \text{students}$$

Who is elected as the class representative?

$$\boxed{\textbf{Emma}}$$

Answer:

- To find the total number of students who voted, add the number of votes for each candidate:

$$6\,(\text{Emma}) + 4\,(\text{Liam}) + 3\,(\text{Noah}) = 13\,\text{students}$$
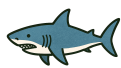
  So, 13 students voted.

- The elected class representative is the candidate with the highest number of votes. Emma has 6 votes, which is more than Liam (4 votes) and Noah (3 votes). So, Emma is elected as the class representative.

B REPRESENTING DATA

B.1 INTERPRETING PICTOGRAPHS

Ex 10: In his class, Hugo asks the students: "What do you fear the most?"

He represents the result with a pictograph

5	🕷			
4	🕷			
3	🕷		🦈	
2	🕷	👾	🦈	
1	🕷	👾	🦈	🐜
	Spider	Monster	Shark	Ant

How many students select shark as the most feared?

$\boxed{3}$ students

Which is the most feared?

$\boxed{\textbf{Spider}}$

Which is the least feared?

$\boxed{\textbf{Ant}}$

Answer: To find the totals, count the number of students for each fear from the pictograph:

- Spider: 5 students.

- Monster: 2 students.

- Shark: 3 students.

- Ant: 1 student.

1. For Shark, there are 3 students.

2. The most feared is the one with the highest number of students. Spider has 5 students.

3. The least feared is the one with the lowest number of students. Ant has 1 student, which is less than Spider (5), Shark (3), and Monster (2). So, Ant is the least feared.

Ex 11: In his class, Hugo asks the students: "What is your favorite fruit?"
He represents the result with a pictograph

5			🍎	
4		🍊	🍎	
3		🍊	🍎	
2		🍊	🍎	🍒
1	🍋	🍊	🍎	🍒
	Lemon	Orange	Apple	Cherry

How many students select orange as favorite fruit?

$\boxed{4}$ students

Which fruit is the most popular?

$\boxed{\textbf{Apple}}$

Which fruit is the least popular?

$\boxed{\textbf{Lemon}}$

Answer: To find the totals, count the number of students for each fruit from the pictograph:

- Lemon: 1 student).

- Orange: 4 students.

- Apple: 5 students.

- Cherry: 2 students.

1. For Orange, there are 4 students.

2. The most popular fruit is the one with the highest number of students. Apple has 5 students, which is more than Orange (4), Cherry (2), and Lemon (1). So, Apple is the most popular.

3. The least popular fruit is the one with the lowest number of students. Lemon has 1 student, which is less than Orange (4), Apple (5), and Cherry (2). So, Lemon is the least popular.

Ex 12: In his class, Hugo asks the students: "What is your favorite food?"
He represents the result with a pictograph

5	🥕			
4	🥕			
3	🥕		🌽	
2	🥕	🥒	🌽	
1	🥕	🥒	🌽	🥔
	Carrot	Cucumber	Corn	Potato

How many students select corn as favorite food?

$\boxed{3}$ students

Which food is the most popular?

$\boxed{\textbf{Carrot}}$

Which food is the least popular?

$\boxed{\textbf{Potato}}$

Answer: To find the totals, count the number of students for each food from the pictograph:

- Carrot: 5 students.

- Cucumber: 2 students.

- Corn: 3 students.

- Potato: 1 student.

1. For Corn, there are 3 students.

2. The most popular food is the one with the highest number of students. Carrot has 5 students, which is more than Cucumber (2), Corn (3), and Potato (1). So, Carrot is the most popular.

3. The least popular food is the one with the lowest number of students. Potato has 1 student, which is less than Carrot (5), Cucumber (2), and Corn (3). So, Potato is the least popular.