Chapter 14: Data Handling

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Exercise 14.1 — Which Subject Do You Like? — Counting Responses

Q1 Anjali and Rohan recorded 45 children's responses: T, A, P.E., A, M, P.E., L, L, P.E., A, T, M, A, P.E., P.E., T, P.E., M, L, P.E., P.E., A, M, A, L, P.E., M, T, A, T, M, M, P.E., A, L, M, L, P.E., A, T, L, M, M, T, L. The number of children who like Mathematics the most is ____.

SOLUTION

Count every M in the list: M, M, M, M, M, M, M, M, M, M

Total count of M = 10

10 children like Mathematics the most.

Q2 The number of children who like Language the most is ____.

SOLUTION

Count every L in the list: L, L, L, L, L, L, L, L

Total count of L = 8

8 children like Languages the most.

Q3 The number of children who like The World Around Us the most is ____.

SOLUTION

Count every T in the list: T, T, T, T, T, T, T

Total count of T = 7

7 children like The World Around Us the most.

Q4 The number of children who like Physical Education the most is ____.

SOLUTION

Count every P.E. in the list: P.E., P.E., P.E., P.E., P.E., P.E., P.E., P.E., P.E., P.E., P.E.

Total count of P.E. = 11

11 children like Physical Education the most.

Q5 The number of children who like Arts the most is ____.

SOLUTION

Count every A in the list: A, A, A, A, A, A, A, A, A
Total count of A = 9
9 children like Arts the most.

Q6 Fill the table with the counts. What is the most common favourite subject among the children?

SOLUTION

From counting: M = 10, L = 8, T = 7, P.E. = 11, A = 9
Table: Mathematics = 10 | Languages = 8 | The World Around Us = 7 | Physical Education = 11 | Arts = 9
The highest count is 11 (Physical Education).
The most common favourite subject is Physical Education.

Q7 What is the least common favourite subject among the children?

SOLUTION

From the counts: M = 10, L = 8, T = 7, P.E. = 11, A = 9
The lowest count is 7 (The World Around Us).
The least common favourite subject is The World Around Us.

Q8 There are two ways to display the same information — as a raw list of responses (Way 1) and as a tally table (Way 2). Which way of displaying information is easier to understand and why?

SOLUTION

Way 1 shows a long raw list of 45 individual responses (e.g., T, A, P.E., A, M, ...).
Way 2 organises the same data into a table with subjects and their counts.
Way 2 (the table) is easier to understand because all the counts are together in one place — you can compare subjects at a glance without reading through 45 individual entries.
Way 2 (the table) is easier to understand.

Q9 Anjali's question was: 'Which subject do you like the most?' Rohan's question was: 'Which subjects do you like?' Which question is more appropriate for finding the most liked subject? Why?

SOLUTION

Rohan's question allows children to name multiple subjects, so one child may mention 2 or 3 subjects — this makes it hard to find a single 'most liked' subject per person.
Anjali's question asks for only ONE subject (the most liked), so each child gives exactly one

response — making it easy to count and compare.
Anjali's question ('Which subject do you like the most?') is more appropriate because it gives a clear single answer per child, allowing direct comparison.

Exercise 14.2 — Colourful Golas — Reading a Pictograph

Q1 Rohan and Anjali recorded golas eaten by different children. Which colour ice gola do the children eat the most?

SOLUTION

Look at Anjali's pictograph. Count each colour's symbols: Red = 8, Blue = 5, Orange = 7, Yellow = 10. Yellow has the highest count (10). Yellow gola is eaten the most.

Q2 Which colour ice gola do the children eat the least?

SOLUTION

Count each colour's symbols: Red = 8, Blue = 5, Orange = 7, Yellow = 10. Blue has the lowest count (5). Blue gola is eaten the least.

Q3 Which colour gola would Anjali and Rohan have bought?

SOLUTION

Anjali and Rohan wanted to buy the colour eaten the most by the children. From the pictograph, Yellow gola has the highest count (10). Anjali and Rohan would have bought Yellow gola.

Q4 Which colour golas did boys eat the most?

SOLUTION

Look at Rohan's tally. Plain figures (straight body) = boys; triangle-body figures (skirt shape) = girls. Count boys per colour: Red = 4 boys, Blue = 4 boys, Orange = 3 boys, Yellow = 6 boys. Yellow has the most boys (6). Boys ate Yellow gola the most.

Q5 Which colour golas did girls eat the most?

SOLUTION

Count girls (triangle-body figures) per colour in Rohan's tally: Red = 4 girls, Blue = 1 girl, Orange = 4 girls, Yellow = 4 girls. Red and Orange are tied at 4 girls each; Blue has the fewest. Girls ate Red gola and Orange gola the most (both have 4 girls).

Q6 Which of the ways of representing data did you use to answer questions about the golas, and why?

SOLUTION

To answer questions 3 and 4 (boys vs girls), you needed the table/tally that separates data by boys and girls — a simple overall count would not be enough.

For question 1 (most/least overall), both the raw tally and the organised table work, but the

table is quicker.

We used the organised table (tally chart) because it groups the data clearly by colour and by boys/girls, making comparison easy at a glance.

Exercise 14.3 — Activity — Chess or Cricket

Q1 After collecting classmates' data about chess and cricket (chess only, cricket only, both, neither) fill the table. Who plays Chess the most — Boys or Girls?

SOLUTION

This is a classroom data-collection activity; the answer will vary based on your own class.
Count the number of boys and girls in the 'Chess but not Cricket' row plus the 'Both' row for each gender.
Compare the total chess-players among boys vs girls; whichever is higher plays chess the most.
Answer: Boys / Girls (based on your class data).

Q2 Who plays Cricket the most — Boys or Girls?

SOLUTION

Count the number of boys and girls who play cricket: 'Cricket but not Chess' row plus 'Both' row for each gender.
Compare the totals; whichever gender has more cricket-players plays cricket the most.
Answer: Boys / Girls (based on your class data).

Q3 How many children play both types of games?

SOLUTION

Look at the 'Both' row in the completed table and add the number of boys and girls in that row.
Total children playing both = (boys who play both) + (girls who play both).
Answer: This depends on your class data. Add the Boys and Girls counts in the 'Both' row.

Exercise 14.4 — Let Us Do — Bal Mela Pictograph

Q1 Anjali and Rohan recorded the number of fruit chaats and sandwiches sold over three days using a pictograph. Complete the table: Total Fruit Chaats sold and Total Sandwiches sold.

SOLUTION

Count pictograph symbols (1 symbol = 1 item). Fruit Chaat (Anjali): Day 1 = 8, Day 2 = 12, Day 3 = 10; Total Fruit Chaats = 30. Sandwiches (Rohan): Day 1 = 12, Day 2 = 14, Day 3 = 17; Total Sandwiches = 43.

Q2 On which day were the most sandwiches sold?

SOLUTION

Count sandwich symbols per day from Rohan's pictograph: Day 1 = 12, Day 2 = 14, Day 3 = 17. Day 3 has the most sandwich symbols. The most sandwiches were sold on Day 3.

Q3 Which item had the highest sale on Day 2?

SOLUTION

On Day 2, count the symbols for each item: Fruit Chaats = 12, Sandwiches = 14. Sandwiches (14) is more than Fruit Chaats (12). Sandwiches had the highest sale on Day 2.

Q4 Complete the table of Total Sales per day (Day 1, Day 2, Day 3) and circle the day that had the highest sales.

SOLUTION

Add fruit chaats and sandwiches for each day. Day 1 total = 8 + 12 = 20. Day 2 total = 12 + 14 = 26. Day 3 total = 10 + 17 = 27. Day 3 has the highest total sales (27). Circle Day 3.