Chapter 13: So Many Toys

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Exercise 13.1 — So Many Toys — Pictograph

Q1 Look at the picture and find the number of different toys. How many Elephants, Teddy Bears, Cars, and Dolls are there?

SOLUTION

Count each toy in the toy shop picture. Elephants = 4, Teddy Bears = 3, Cars = 2, Dolls = 4.

Q2 Complete the sentence: The number of dolls is _____ the number of cars. (more than / less than / equal to)

SOLUTION

Dolls = 4, Cars = 2. Since 4 > 2, the number of dolls is more than the number of cars.

Q3 Complete the sentence: The number of elephants is _____ the number of dolls. (more than / less than / equal to)

SOLUTION

Elephants = 4, Dolls = 4. Since both are equal, the number of elephants is equal to the number of dolls.

Q4 Complete the sentence: The number of teddy bears is _____ the number of elephants. (more than / less than / equal to)

SOLUTION

Teddy Bears = 3, Elephants = 4. Since 3 < 4, the number of teddy bears is less than the number of elephants.

Q5 Complete the sentence: The number of cars is _____ the number of teddy bears. (more than / less than / equal to)

SOLUTION

Cars = 2, Teddy Bears = 3. Since 2 < 3, the number of cars is less than the number of teddy bears.

Exercise 13.2 — Colourful Flowers — Pictograph

Q1 Look at the picture of colourful flowers and write the number of Blue flowers, Orange flowers, Red flowers, and Purple flowers.

SOLUTION

Count each colour in the flower vine picture. Blue flowers = 6, Orange flowers = 6, Red flowers = 4, Purple flowers = 4.

Q2 Name the colour of flowers which are least in number.

SOLUTION

Red and Purple both have the fewest flowers (4 each). Either Red or Purple is the least. (Red flowers are least in number.)

Q3 Name the colour of the flowers which are most in number.

SOLUTION

Blue and Orange both have the most flowers (6 each). Either Blue or Orange is the most. (Blue flowers are most in number.)

Q4 True or False: Number of red flowers is more than the blue flowers.

SOLUTION

Red flowers = 4, Blue flowers = 6. Since 4 is NOT more than 6, this is False.

Q5 True or False: Number of orange flowers is less than the purple flowers.

SOLUTION

Orange flowers = 6, Purple flowers = 4. Since 6 is NOT less than 4, this is False.

Exercise 13.3 — Project Work

Q1 Make a card with a border of colourful flowers.

SOLUTION

Draw or cut out flowers of different colours.
Arrange them along the edges of a card to make a colourful border.
This is a craft activity — there is no single correct answer.

Q2 Find out in your class how many children have 3 letters in their names, how many children have 4 letters in their names and how many children have more than 4 letters in their names.

SOLUTION

Ask each classmate their name and count the letters.
Make three groups: names with 3 letters, names with 4 letters, names with more than 4 letters.
Count how many children fall in each group and write the numbers.

Exercise 13.4 — Puzzles

Q1 Kopal arranged number cards and Anaya hid them with bowls. Can you recognise the numbers?

SOLUTION

Read the digits peeking out from under each bowl. The hidden numbers in order are: 2, 5, 8, 9, 6 (top row) and 5, 4 (bottom row). Use the visible parts of each digit to recognise it.

Q2 Count the number of logs. Is it 3 logs or 4 logs?

SOLUTION

Look at the picture carefully — the logs overlap and one child says 4, the other says 3. Count each separate log end: there are 4 logs.

Q3 Zarina set the glasses in a pattern. Help her in extending the arrangement.

SOLUTION

The glasses are arranged in a growing triangle pattern: 1, then 3 (triangle of 2 rows), then 6 (triangle of 3 rows). The next two groups follow the same rule: the next arrangement has 10 glasses (4 rows), then 15 glasses (5 rows).

Q4 Find the numbers from 1 to 10 hidden in the word grid.

SOLUTION

Search across rows and down columns for: one, two, three, four, five, six, seven, eight, nine, ten. Found in the grid: EIGHT (row 1), FIVE (row 2), TWO (row 3), NINE (row 4), TEN (row 5, cols 3-5), SIX (row 6), ONE (column 6, rows 4-6). All 10 number words are hidden in the grid.

Q5 Fill the numbers from 1 to 5 in the given balls so that the sum on both sides of the balance is equal.

SOLUTION

Total of 1+2+3+4+5 = 15. The middle ball holds one number; the two arms each hold two balls. Place 3 in the middle ball. Then put 1 and 5 on one arm (1+5 = 6) and 2 and 4 on the other arm (2+4 = 6).

Both sides are equal, so the balance is level.

Middle = 3; one arm: 1 and 5; other arm: 2 and 4

Q6 Gillu's favourite number is 8. Ask some questions to Gillu that have an answer of 8 only.

SOLUTION

Think of sums, differences, or stories where the answer is 8.
Examples: What is 4+4? What is 10−2? I have 5 apples and 3 more are given to me, how many now?
Make up your own questions — any question whose answer is 8 is correct.

Q7 Fill circle, square, and triangle shapes in the boxes so that each shape occurs only once in every row and every column.

SOLUTION

The 3x3 grid has triangle (top-left), square (centre), circle (bottom-right) pre-filled. Fill in so each shape appears once per row and column. Solution: Row 1: triangle, circle, square. Row 2: circle, square, triangle. Row 3: square, triangle, circle.

Q8 Take 4 different objects (4 buttons, 4 pebbles, 4 seeds, 4 clay balls). Place them so that every object occurs only once in a row and a column.

SOLUTION

Arrange the 4 kinds of objects in a 4×4 grid.
Each row must have one of each object, and each column must have one of each object.
This is a fun activity — try different arrangements to find all possible ways.

Q9 Who am I? (A mirror can help you.) Numbers shown: 52, 37, 25, 93.

SOLUTION

Hold a mirror to each number or flip it upside down.
52 reflected in a mirror reads 25; 37 reflected reads 73; 25 reflected reads 52; 93 reflected reads 39.
The mirror reverses the digits' left-right orientation.

Q10 Who am I? (i) I am between 5 and 10. I become three more when read upside down.

SOLUTION

Numbers between 5 and 10: 6, 7, 8, 9.
6 upside down looks like 9. 9 − 6 = 3, so I become 3 more when read upside down.
Answer: 6
6

Q11 Who am I? (ii) I am 3 more than 8 and 3 less than 14.

SOLUTION

3 more than 8 = 8 + 3 = 11.
Check: 3 less than 14 = 14 − 3 = 11. Both give the same answer.
11

Q12 Who am I? (iii) I am after 50 and before 54. Sum of my digits is 7.

SOLUTION

Numbers after 50 and before 54: 51, 52, 53.
Check digit sums: 51 → 5+1=6, 52 → 5+2=7, 53 → 5+3=8.
52 has digit sum 7.
52

Q13 Who am I? (iv) I am just before 40.

SOLUTION

The number just before 40 is one less than 40.
40 − 1 = 39.
39

Q14 Who am I? (v) Add 5 to me and you will get 24.

SOLUTION

Let the number be n. Then n + 5 = 24.
n = 24 − 5 = 19.
19

Q15 Who am I? (vi) I am just after 35.

SOLUTION

The number just after 35 is one more than 35.
35 + 1 = 36.
36

Q16 Who am I? (vii) Reduce 8 from me and 14 will be left.

SOLUTION

Let the number be n. Then n − 8 = 14.
n = 14 + 8 = 22.
22

Q17 Six matchsticks are used to make a zero. Can you make any other number by shifting a single matchstick?

SOLUTION

Zero (0) is made with 6 matchsticks forming a closed oval.
Shift one matchstick: moving one stick from the oval gives the number 6 or 9 depending on placement.
Try shifting just one stick and see which digit you get.

Q18 Find out the missing piece and complete the pot.

SOLUTION

Look at the broken pot and the loose pieces. Find the piece whose curved shape and brown-and-white pattern matches the missing section on the lower-left side of the pot. That is the missing piece — pick the one that fits the gap exactly.

Q19 How many times can you subtract 5 from 25?

SOLUTION

Start at 25 and keep subtracting 5: 25−5=20, 20−5=15, 15−5=10, 10−5=5, 5−5=0.
We subtracted 5 exactly 5 times before reaching 0.
5 times

Q20 Ranu has 3 seeds. She wants to place them on any 3 numbers from the chart so that their sum is 17. Can you help Ranu? (Chart: 4, 9, 6, 7, 16, 0, 8, 5, 15, 13, 1, 2, 17, 10, 3, 12)

SOLUTION

We need three different numbers from the chart that add up to 17.
One way: 4 + 6 + 7 = 17. Another way: 4 + 8 + 5 = 17. Another: 0 + 4 + 13 = 17.
There are many ways — try to find more!
One example: 4 + 6 + 7 = 17

Q21 If you have 2 seeds, which two numbers from the chart will you choose to get a total of 17?

SOLUTION

We need two different numbers from the chart that add up to 17.
Examples: 4+13=17, 9+8=17, 7+10=17, 5+12=17, 0+17=17.
Examples: 4+13=17, 9+8=17, 5+12=17

Q22 Encircle the identical shadow image (one of four options i, ii, iii, iv).

SOLUTION

Compare the original monkey (crawling left, tail curving up) with each shadow. Shadow (i) matches the pose and outline exactly (mirror silhouette). Circle option (i).

Q23 Write numbers from 5 to 9 in the card so that the row total and column total are the same.

SOLUTION

Place numbers 5 to 9 (each once) in the plus-shaped grid so row total = column total. Solution: put 7 in the centre, 5 and 9 on the left and right (row: 5+7+9=21), 6 and 8 on the top and bottom (column: 6+7+8=21). Both totals equal 21.

Q24 Try to get the centre number by doing addition or subtraction. (Hint: 3+__ and 7−1=__; centre=3, outer numbers given in picture)

SOLUTION

Three number wheels are shown. Blue wheel (centre=6): the outer petals give 7-1=6 and 3+3=6 (already filled as examples). Pink wheel (centre=11): fill outer petals with pairs that make 11, e.g. 9+2, 8+3, 7+4, 6+5. Green wheel (centre=15): fill outer petals with pairs that make 15, e.g. 9+6, 8+7, 10+5.

Q25 Write the correct numbers in the boxes (number sentence with shapes).

SOLUTION

The number web has centre=15. Each outer blank circle + its inner number = 15. Fill the blank circles: the circle next to 9 = 6, next to 3 = 12, next to 6 = 9, next to 2 = 13, next to 9 (bottom) = 6, next to 4 = 11, next to 7 = 8, next to 8 = 7.

Q26 Sarita has four coins of different values. What is the minimum number of coins used to spend exactly 49?

SOLUTION

The four coins shown are 10, 5, 2, and 1. To make exactly 49 using the minimum number of coins: use 4 coins of 10 (=40), 1 coin of 5 (=5), and 2 coins of 2 (=4).
Total = 40+5+4 = 49. Minimum coins = 7.

Q27 Find out the value of orange. Given: orange + orange = 8 and orange + ? = 10.

SOLUTION

From orange + orange = 8: 2 × orange = 8, so orange = 8 ÷ 2 = 4.
Now orange + ? = 10 → 4 + ? = 10, so ? = 10 − 4 = 6.
orange = 4; the other fruit = 6

Q28 Ball game: (i) Choose 3 balls so their sum is 15. (ii) Choose 3 balls to get a maximum score. (iii) Choose 3 balls to get a minimum score.

SOLUTION

The balls show values 2, 4, 6, 8. The hint says rotate the balls — rotating 6 upside-down reads as 9. (i) Sum=15: choose balls 2, 4, 9 (rotate 6→9): 2+4+9=15. (ii) Maximum: choose 4, 8, 9 (rotate 6→9): 4+8+9=21. (iii) Minimum: choose 2, 4, 6: 2+4+6=12.