

## 9. Word Problems: Addition and Subtraction



### Addition

- ◆ Aunt Uma bought 5 kilograms of toordal for ₹ 345 and 20 kilograms of rice for ₹ 789. How much money did Aunt Uma spend?

|                               |                                        | Method                                                              |
|-------------------------------|----------------------------------------|---------------------------------------------------------------------|
| What information is given?    | The cost of toordal and rice is given. | Cost of dal ₹ 345<br>Cost of rice ₹ 789                             |
| What is asked?                | Total cost.                            |                                                                     |
| What method should be used?   | Addition                               | $  \begin{array}{r}  345 \\  + 789 \\  \hline  1134  \end{array}  $ |
| Aunt Uma spent ₹ 1134 in all. |                                        |                                                                     |

- ◆ The cost of a refrigerator is ₹ 13,750 and the cost of a cupboard is ₹ 8,999. How much must we pay the shopkeeper to buy them both ?

$$\begin{array}{r}
 111 \\
 13750 \text{ Cost of the refrigerator} \\
 + 8999 \text{ Cost of the cupboard} \\
 \hline
 22749 \text{ Amount to be paid to the shopkeeper.}
 \end{array}$$

The shopkeeper must be paid ₹ 22, 749.

### Exercise

- Baburao planted 143 sweet lime trees and 156 chikoo trees in his orchard. How many trees did he plant in all ?
- Priyanka bought books worth ₹ 245 and notebooks worth ₹ 178. How much did she spend altogether ?
- There are 1,230 story-books and 150 poetry books in a library. How many books are there in the library altogether ?
- If 1,310 children, 1,505 women and 790 men came to watch the circus, how many people came to watch the circus altogether ?
- Ajay deposited ₹ 18,000 in one bank and ₹ 15,000 in another. What is the total amount of money be deposited in the banks ?

## Subtraction

- ◆ There are 1,473 Marathi books and 586 Hindi books in a school library. Which language has more books than the other and how many more are there ?

|                                                    |                                         | Method |
|----------------------------------------------------|-----------------------------------------|--------|
| What information is given?                         | Marathi books 1, 473<br>Hindi books 586 |        |
| Which language has more books?                     | Marathi                                 |        |
| What is asked?                                     | How many more books in which language?  |        |
| What method should be used?                        | Subtraction                             |        |
| There are 887 more Marathi books than Hindi books. |                                         |        |

- ◆ The sum of two numbers is 31,426.  
One of the numbers is 17,548.  
What is the other number ?

The other number is 13,878

|   |    |    |    |    |
|---|----|----|----|----|
| 2 | 10 | 13 | 11 |    |
|   |    | 0  | 3  | 16 |
|   |    | 3  | 7  | 4  |
|   |    | 1  | 7  | 5  |
|   |    | 1  | 3  | 8  |

## Exercise

- Abdul had 720 beads. He sold 648 of them. How many beads does he have left?
- Joseph bought tables worth ₹6,350 and chairs worth ₹3,800. How much more did the tables cost than the chairs ?
- Ragahvrao bought seeds worth ₹3,587 and fertilizers worth ₹4,655. How much more than the seeds did the fertilizers cost?
- The reading of the electricity meter in Nisha's house was 03452 on the 1st of June. On the 1st of July, it was 03531. How many units of electricity were used in June?
- In a census taken in 2001, the population of a village was 62,947. The census of the year 2011 listed the population as 74,405. How much did the population increase in the meantime?

## Addition and subtraction: Mixed problems

- ◆ There are 42,306 trees in a forest. Of these 23,479 are teak trees and 16,675 are subabhl trees. How many other trees are there in the forest?

|                                            |                                                                        | Method                                                                                                                                                                                                                                                                                             |              |   |   |    |   |   |   |              |              |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---|---|----|---|---|---|--------------|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| What is asked?                             | The number of other trees                                              |                                                                                                                                                                                                                                                                                                    |              |   |   |    |   |   |   |              |              |   |   |   |   |   |   |   |   |   |   |   |   |   |
| What information is given?                 | Total trees : 42,306<br>Teak trees : 23,479<br>Subabhul trees : 16,675 |                                                                                                                                                                                                                                                                                                    |              |   |   |    |   |   |   |              |              |   |   |   |   |   |   |   |   |   |   |   |   |   |
| What will you do first?                    | Add teak and subabhul trees.                                           | <table><tr><td>2</td><td>3</td><td>4</td><td>7</td><td>9</td></tr><tr><td>+</td><td>1</td><td>6</td><td>6</td><td>7</td><td>5</td></tr><tr><td></td><td>4</td><td>0</td><td>1</td><td>5</td><td>4</td></tr></table>                                                                                | 2            | 3 | 4 | 7  | 9 | + | 1 | 6            | 6            | 7 | 5 |   | 4 | 0 | 1 | 5 | 4 |   |   |   |   |   |
| 2                                          | 3                                                                      | 4                                                                                                                                                                                                                                                                                                  | 7            | 9 |   |    |   |   |   |              |              |   |   |   |   |   |   |   |   |   |   |   |   |   |
| +                                          | 1                                                                      | 6                                                                                                                                                                                                                                                                                                  | 6            | 7 | 5 |    |   |   |   |              |              |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                            | 4                                                                      | 0                                                                                                                                                                                                                                                                                                  | 1            | 5 | 4 |    |   |   |   |              |              |   |   |   |   |   |   |   |   |   |   |   |   |   |
| What will you do next?                     | Subtract this sum from the total number of trees                       | <table><tr><td></td><td></td><td>2</td><td>10</td><td></td></tr><tr><td>4</td><td>2</td><td><del>3</del></td><td><del>0</del></td><td>6</td></tr><tr><td>-</td><td>4</td><td>0</td><td>1</td><td>5</td><td>4</td></tr><tr><td></td><td>0</td><td>2</td><td>1</td><td>5</td><td>2</td></tr></table> |              |   | 2 | 10 |   | 4 | 2 | <del>3</del> | <del>0</del> | 6 | - | 4 | 0 | 1 | 5 | 4 |   | 0 | 2 | 1 | 5 | 2 |
|                                            |                                                                        | 2                                                                                                                                                                                                                                                                                                  | 10           |   |   |    |   |   |   |              |              |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4                                          | 2                                                                      | <del>3</del>                                                                                                                                                                                                                                                                                       | <del>0</del> | 6 |   |    |   |   |   |              |              |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -                                          | 4                                                                      | 0                                                                                                                                                                                                                                                                                                  | 1            | 5 | 4 |    |   |   |   |              |              |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                            | 0                                                                      | 2                                                                                                                                                                                                                                                                                                  | 1            | 5 | 2 |    |   |   |   |              |              |   |   |   |   |   |   |   |   |   |   |   |   |   |
| There are 2,152 other trees in the forest. |                                                                        |                                                                                                                                                                                                                                                                                                    |              |   |   |    |   |   |   |              |              |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Exercise

- Rohan spent ₹ 27,658 for purchasing computers and ₹ 16,478 on a printer and scanner. Packing and transporting the goods cost extra. Rohan spent a total of ₹ 47,000. How much did he spend on packing and transport?
- In a nursery, there were 32,140 saplings. 12,789 were mango saplings and 10,423 were teak saplings. How many other saplings were there?
- The seating capacity of a playground is 20,750. If there were 8,500 women and 11,200 men present for a function, how many seats remained vacant?
- Rambhau had ₹ 15,000. He bought fodder worth ₹ 8,570 and other animal feed worth ₹ 4,950. How much money did he have left?
- Lalitaben donated ₹ 75,000 to a hospital. ₹ 47,500 were used for equipment and ₹ 18,240 were used for medicines. How much money still remains?

### Making problems based on the given information and solving them

#### ◆ Make an addition problem based on the given information and solve it.

Given information : Number of men 1,450; number of women 1,270

Example : There are 1,450 men and 1,270 women working in a company. How many people work in the company in all ?

In all, 2,720 people work in the company.

|           |       |
|-----------|-------|
| 1 4 5 0   | Men   |
| + 1 2 7 0 | Women |
| 2 7 2 0   | Total |

#### ◆ Make a subtraction problem based on the given information and solve it.

Given information : Cost of one motorcycle : ₹ 47,580

Cost of another motorcycle : ₹ 50,240

Example: 'A' company's motorcycle costs ₹ 47,580 and 'B' company's motorcycle costs ₹ 50,240.

Which company's motorcycle is more expensive and by how much?

'B' company's motorcycle costs ₹ 2660 more.

|             |        |
|-------------|--------|
| 5 0 2 4 0   | Rupees |
| - 4 7 5 8 0 | Rupees |
| 0 2 6 6 0   | Rupees |

#### Exercise

Based on the given information, make one addition and one subtraction problem each and solve the problems.

- (1) Cost of one company's washing machine : ₹ 19,999; cost of another company's washing machine : ₹ 21,550.
- (2) ₹ 3,900 worth of fodder and ₹ 2,570 worth of other animal feed.
- (3) The population of one town, 76,560; the population of another town, 57,940.
- (4) The flight ticket from Mumbai to Tokyo, ₹ 35,840; the flight ticket from Tokyo to Los Angeles, ₹ 38,760.
- (5) Cost of a new motorcycle, ₹ 46,530; cost of an old motorcycle, ₹ 8,500.
- (6) 17,500 maths books; 13,250 science books.
- (7) The bus from Kolhapur to Mumbai passes through Pune. The distance from Pune to Mumbai is 192 kilometres. The distance from Pune to Kolhapur is 235 kilometres.
- (8) The capacity of one water tank is 38,500 litres; the capacity of another water tank is 22,750 litres.