

## 2. By Counting in 10s

$$\begin{aligned} \text{(a)} \quad & 34 + 27 \\ & = 34 + 10 + 10 + 7 \\ & = 54 + 7 \\ & = 61 \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad & 753 + 45 \\ & = 753 + 10 + 10 + 10 + 10 + 5 \\ & = 793 + 5 \\ & = 798 \end{aligned}$$

Check this

$$\begin{aligned} & 34 + 10 + 10 + 7 \\ & = 34 \rightarrow 44 \rightarrow 54 + 7 \end{aligned}$$

Check this

$$\begin{aligned} & 753 + 10 + 10 + 10 + 10 + 5 \\ & = 753 \rightarrow 763 \rightarrow 773 \rightarrow 783 \\ & \rightarrow 793 + 5 \end{aligned}$$

## 3. By Breaking Both the Addends

$$\begin{aligned} \text{(a)} \quad & 45 + 23 \\ & = 40 + 5 + 20 + 3 \\ & = 40 + 20 + 5 + 3 \\ & = 60 + 8 \\ & = 68 \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad & 215 + 362 \\ & = 200 + 10 + 5 + 300 + 60 + 2 \\ & = 200 + 300 + 10 + 60 + 5 + 2 \\ & = 500 + 70 + 7 \\ & = 577 \end{aligned}$$

## 4. By Breaking One Addend

$$\begin{aligned} \text{(a)} \quad & 78 + 46 \\ & = 78 + 40 + 6 \\ & = 118 + 6 \\ & = 124 \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad & 314 + 424 \\ & = 314 + 400 + 20 + 4 \\ & = 714 + 20 + 4 \\ & = 734 + 4 \\ & = 738 \end{aligned}$$

## VERTICAL ADDITION

### Addition of 3-Digit Numbers With Regrouping

Rubal read three books. First book had 346 pages, second book had 264 pages and third book had 127 pages. How many pages in all were read by Rubal?  
So, total number of pages read by Rubal =  $346 + 264 + 127$   
Let us add 346, 264 and 127.



#### Step 1

Arrange the numbers in columns.

	H	T	O
	3	4	6
+	2	6	4
	1	2	7

#### Step 2

Add ones.

$$6 + 4 + 7 = 17 \text{ ones} \\ = 1 \text{ ten } 7 \text{ ones.}$$

Write 7 in the ones column and carry 1 to the tens column.

	H	T	O
		1	
	3	4	6
+	2	6	4
	1	2	7
			7

#### Step 3

Add tens.

$$1 + 4 + 6 + 2 \\ = 13 \text{ tens} \\ = 1 \text{ hundred } 3 \text{ tens.}$$

Write 3 in the tens column and carry 1 to the hundreds column.

	H	T	O
	1	1	
	3	4	6
+	2	6	4
	1	2	7
		3	7

#### Step 4

Add hundreds.

$$1 + 3 + 2 + 1 = 7$$

	H	T	O
	1	1	
	3	4	6
+	2	6	4
	1	2	7
	7	3	7

So,  $346 + 264 + 127 = 737$ .

Let us regroup hundreds to thousands.

$$14 \text{ hundreds} = 1 \text{ thousand} + 4 \text{ hundreds}$$

$$1 \text{ thousand} + 18 \text{ hundreds} = 1 \text{ thousand} + 1 \text{ thousand} + 8 \text{ hundreds}$$

$$= 2 \text{ thousands} + 8 \text{ hundreds}$$

$$3 \text{ thousands} + 24 \text{ hundreds} = 3 \text{ thousands} + 2 \text{ thousands} + 4 \text{ hundreds}$$

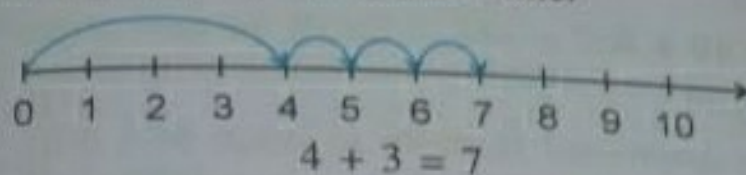
$$= 5 \text{ thousands} + 4 \text{ hundreds}$$

## ADDITION OF NUMBERS

There are various ways we can add numbers.

### 1. Using Number Line

We can add small numbers on the number line.



We start from 0 and jump to 4. From 4, we move 3 numbers to the right. We reach at 7. So,  $4 + 3 = 7$ .

## Addition of 4-digit Numbers With Regrouping

A factory has 4839 male workers and 1278 female workers. Find the total number of workers in the factory?

Total number of workers in the factory  
 $= 4839 + 1278$



**Step 1**  
 Arrange the number  
 in columns.

	Th	H	T	O
+	4	8	3	9
	1	2	7	8

**Step 2**  
 Add the ones.  
 $9 + 8 = 17$  ones  
 $= 1$  ten 7 ones.  
 Write 7 in the ones column  
 and carry 1 to tens column.

	Th	H	T	O
			1	
+	4	8	3	9
	1	2	7	8
				7

**Step 3**  
 Add the tens.  
 $1 + 3 + 7 = 11$  tens  
 $= 1$  hundred 1 ten.  
 Write 1 in tens column and  
 carry 1 to hundreds column.

	Th	H	T	O
		1	1	
+	4	8	3	9
	1	2	7	8
			1	7

## ESTIMATING SUMS

A shopkeeper has 271 white candles and 128 red candles.  
How many candles are there in all?  
Let us estimate their sum by rounding them.

Here, estimated sum is close to the actual sum.

So, the shopkeeper has about 400 candles.

Consider one more example.

There are 182 red cars and 107 black cars in a showroom. How many cars are there in all?

So, there are about 290 cars in the showroom.

$$\textcircled{271} + \textcircled{128}$$

$$\downarrow \quad \downarrow$$
$$270 + 130 = 400$$

← Estimated sum

$$271 + 128 = 399$$

← Actual sum

$$\textcircled{182} + \textcircled{107}$$

$$\downarrow \quad \downarrow$$
$$180 + 110 = 290$$

← Estimated sum

$$182 + 107 = 289$$

← Actual sum



#### Step 4

Add the hundreds.

$$1 + 8 + 2 = 11 \text{ hundreds}$$

= 1 thousand 1 hundred.

Write 1 under hundreds column and carry 1 to thousands column.

	Th	H	T	O
	1	1	1	
+	4	8	3	9
	1	2	7	8
		1	1	7

#### Step 5

Add the thousands.

$$1 + 4 + 1 = 6 \text{ thousands.}$$

Write 6 under thousands column.

	Th	H	T	O
	1	1	1	
+	4	8	3	9
	1	2	7	8
	6	1	1	7

$$4839 + 1278 = 6117.$$

Therefore, there are 6117 workers in the factory.

## WORD PROBLEMS

Example -1

Q-1 Shikha bought a dinner set for ₹ 2345, a cupboard for ₹ 2481 and a Table for ₹ 3456. Find the total amount spent by her.

Statment-

Cost of dinner set = 2345

Cost of cupboard = 2481

Cost of table = 3456

	Th	H	T	O
	1	1	1	
	2	3	4	5
	2	4	8	1
+	3	4	5	6
<b>Ans</b>	<b>8</b>	<b>2</b>	<b>8</b>	<b>2</b>

Total Money spent = 8282