

Addition

When we put things together, we 'add' them

The sign used for addition is '+' and is read as plus.

- The numbers we add are called as **augend** and **addend**.
- The answer we get is called **sum**

Example:

$$\begin{array}{r}
 25 \longrightarrow \text{Augend} \\
 + 13 \longrightarrow \text{Addend} \\
 \hline
 38 \longrightarrow \text{Sum}
 \end{array}$$

Sign of addition ←

Properties

- Changing the order of numbers during addition does not change the answer.
 $15 + 14 = 14 + 15$
- Zero added to any number gives the same number.
 $29 + 0 = 29$
- One added to any number gives the number just after it
 $36 + 1 = 37$

Exercise 2.1



Q1. Change the order of the addend and augend and find the sum.

(a)	$ \begin{array}{r} 32 \\ +14 \\ \hline 46 \end{array} $	$ \begin{array}{r} 14 \\ +32 \\ \hline 46 \end{array} $	(b)	$ \begin{array}{r} 24 \\ +35 \\ \hline 59 \end{array} $	$ \begin{array}{r} 35 \\ +24 \\ \hline 59 \end{array} $	(c)	$ \begin{array}{r} 19 \\ +40 \\ \hline 59 \end{array} $	$ \begin{array}{r} 40 \\ +19 \\ \hline 59 \end{array} $
(d)	$ \begin{array}{r} 53 \\ +12 \\ \hline 65 \end{array} $	$ \begin{array}{r} 12 \\ +53 \\ \hline 65 \end{array} $	(e)	$ \begin{array}{r} 64 \\ +20 \\ \hline 84 \end{array} $	$ \begin{array}{r} 20 \\ +64 \\ \hline 84 \end{array} $	(f)	$ \begin{array}{r} 71 \\ +17 \\ \hline 88 \end{array} $	$ \begin{array}{r} 17 \\ +71 \\ \hline 88 \end{array} $

Q2. Add zero and find the sum.

- (a) $37 + 0 = 37$ (b) $45 + 0 = 45$ (c) $63 + 0 = 63$
 (d) $81 + 0 = 81$ (e) $98 + 0 = 98$ (f) $56 + 0 = 56$

Q3. Add one and find the number just after.

- (a) $52 + 1 = 53$ (b) $37 + 1 = 38$ (c) $83 + 1 = 84$
 (d) $65 + 1 = 66$ (e) $76 + 1 = 77$ (f) $90 + 1 = 91$

Adding three 2-digit numbers: Let us find the sum of 12, 24 and 31 using column method

Step 1: Add ones

T	O			
1	2			
2	4			
+ 3	1			
				7

Step 2: Add tens

T	O			
1	2			
2	4			
+ 3	1			
				6

So

T	O
1	2
2	4
+ 3	1
	6 7

Exercise 2.2



Q1. Add the following.

(a)
$$\begin{array}{r} 12 \\ 26 \\ +30 \\ \hline 68 \end{array}$$

(b)
$$\begin{array}{r} 20 \\ 15 \\ +42 \\ \hline 77 \end{array}$$

(c)
$$\begin{array}{r} 54 \\ 21 \\ +11 \\ \hline 86 \end{array}$$

(d)
$$\begin{array}{r} 14 \\ 32 \\ +43 \\ \hline 89 \end{array}$$

(e)
$$\begin{array}{r} 60 \\ 17 \\ +12 \\ \hline 89 \end{array}$$

(f)
$$\begin{array}{r} 10 \\ 71 \\ +13 \\ \hline 94 \end{array}$$

(g)
$$\begin{array}{r} 45 \\ 21 \\ +32 \\ \hline 98 \end{array}$$

(h)
$$\begin{array}{r} 12 \\ 15 \\ +61 \\ \hline 88 \end{array}$$

- Q2. In an orchard there are 34 mango trees, 42 coconut trees and 21 apple trees. How many trees are there in the orchard in all? = 97 trees
- Q3. In a class 12 students like to study Science, 24 like English and 10 like Maths. Find the total number of students in the class. = 46 students
- Q4. Ria purchased 30 rose flowers, 24 lotus flowers and 15 lilies for the decoration. How many flowers did she purchase altogether? = 69 flowers

Addition with regrouping

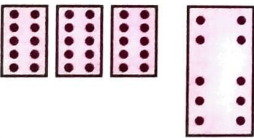

Regrouping to Tens: If there are more than 9 ones we need to regroup

Example: 7 ones + 3 ones = 10 ones

$$10 \text{ ones} = 1 \text{ ten}$$

Adding 2-digit number with 1-digit number

Let us learn to add 34 and 6

T	O	
①		
3	4	
+	6	
	0	

Step 1:


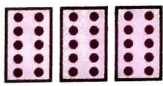
Add ones:

Here 4 ones + 6 ones = 10 ones. Regroup 10 ones as 1 ten. Regroup 10 ones as 1 ten and write 0 in the ones place below. Carry over 1 to the tens column.

Step 2: **Add tens:**

Here 1 ten + 3 tens = 4 tens.

Write 4 in tens place below

T	O		
①			
3	4	and	
+	6		
4	0		

So,

T	O
3	4
+	6
4	0

Regrouping means rearranging the numbers to make addition easier to solve.

Adding 2-digit number with a 2-digit number: Let us learn to add 42 and 38

Step 1: Add ones, then regroup and carry over

Step 2: Add tens

T O

(1)

$$\begin{array}{r} 42 \\ + 38 \\ \hline 0 \end{array}$$

T O

(1)

$$\begin{array}{r} 42 \\ + 38 \\ \hline 80 \end{array}$$

So,

$$\begin{array}{r} 42 \\ + 38 \\ \hline 80 \end{array}$$

Exercise 2.3



Q1. Regroup and add the following.

(a)

$$\begin{array}{r} 51 \\ + 9 \\ \hline 60 \end{array}$$

(b)

$$\begin{array}{r} 68 \\ + 2 \\ \hline 70 \end{array}$$

(c)

$$\begin{array}{r} 73 \\ + 7 \\ \hline 80 \end{array}$$

(d)

$$\begin{array}{r} 77 \\ + 3 \\ \hline 80 \end{array}$$

(e)

$$\begin{array}{r} 46 \\ + 4 \\ \hline 50 \end{array}$$

(f)

$$\begin{array}{r} 35 \\ + 5 \\ \hline 40 \end{array}$$

(g)

$$\begin{array}{r} 22 \\ + 8 \\ \hline 30 \end{array}$$

(h)

$$\begin{array}{r} 14 \\ + 6 \\ \hline 20 \end{array}$$

Q2. Find the sum by regrouping to ten.

(a)

$$\begin{array}{r} 26 \\ + 34 \\ \hline 60 \end{array}$$

(b)

$$\begin{array}{r} 43 \\ + 17 \\ \hline 60 \end{array}$$

(c)

$$\begin{array}{r} 64 \\ + 26 \\ \hline 90 \end{array}$$

(d)

$$\begin{array}{r} 71 \\ + 19 \\ \hline 90 \end{array}$$

(e)

$$\begin{array}{r} 52 \\ + 28 \\ \hline 80 \end{array}$$

(f)

$$\begin{array}{r} 35 \\ + 45 \\ \hline 80 \end{array}$$

(g)

$$\begin{array}{r} 61 \\ + 29 \\ \hline 90 \end{array}$$

(h)

$$\begin{array}{r} 27 \\ + 43 \\ \hline 70 \end{array}$$

Q3. Milkman supplied 46 litres of milk in the morning and 34 litres of milk in the evening. Find the total quantity of milk supplied in a day.

= 80 litres

Q4. Sanya painted 29 pots while Shreya painted 31 pots. How many pots did they paint altogether? = 60 pots

Q5. Vaibhav purchased 53 chocolates. Ritika purchased 7 more chocolates than Vaibhav. Find the number of chocolates Ritika purchased. = 60 chocolates

Regrouping more than ten: If there are more than 10 ones.

then we regroup them as tens and ones.

Example: 8 ones + 6 ones = 14 ones

14 ones = 1 ten + 4 ones

Adding 2-digit number with 1-digit number:

Let us learn to add 28 and 6

Step 1: Add ones

T O (8+6) ones = 14 ones
 14 ones = 1 ten + 4 ones

①
 2 8
 + 6

4

Write 4 in the ones place below carry over 1 to tens column

Step 2: Add tens

T O (1+2) tens = 3 tens.
 Write 3 in tens place below

①
 2 8
 + 6

3

So,

T O
 ①
 2 8
 + 6

 3 4

Adding 2-digit number with 2-digit number: Let us learn to add 37 and 54

Step 1: Add ones then regroup and carry over

T O (7+4) ones = 11 ones
 11 ones = 1 ten + 1 one.

①
 3 7
 + 5 4

1

Write 1 in the ones place below and carry over 1 to the tens column.

Step 2: Add tens

T O (1+3+5) tens = 9 tens
 Write 9 in the tens place below

①
 3 7
 + 5 4

9

So,

T O
 ①
 3 7
 + 5 4

 9 1

Exercise 2.4



Q1. Find the sum.

(a) $\begin{array}{r} 34 \\ + 9 \\ \hline 43 \end{array}$

(b) $\begin{array}{r} 46 \\ + 7 \\ \hline 53 \end{array}$

(c) $\begin{array}{r} 84 \\ + 8 \\ \hline 92 \end{array}$

(d) $\begin{array}{r} 73 \\ + 9 \\ \hline 82 \end{array}$

(e) $\begin{array}{r} 56 \\ + 6 \\ \hline 62 \end{array}$

(f) $\begin{array}{r} 64 \\ + 7 \\ \hline 71 \end{array}$

(g) $\begin{array}{r} 29 \\ + 5 \\ \hline 34 \end{array}$

(h) $\begin{array}{r} 38 \\ + 5 \\ \hline 43 \end{array}$

Q2. Add the following.

(a) $\begin{array}{r} 26 \\ + 55 \\ \hline 81 \end{array}$

(b) $\begin{array}{r} 14 \\ + 74 \\ \hline 88 \end{array}$

(c) $\begin{array}{r} 16 \\ + 65 \\ \hline 81 \end{array}$

(d) $\begin{array}{r} 37 \\ + 59 \\ \hline 96 \end{array}$

(e) $\begin{array}{r} 64 \\ + 29 \\ \hline 93 \end{array}$

(f) $\begin{array}{r} 28 \\ + 46 \\ \hline 74 \end{array}$

(g) $\begin{array}{r} 46 \\ + 37 \\ \hline 83 \end{array}$

(h) $\begin{array}{r} 53 \\ + 29 \\ \hline 82 \end{array}$

Q3. Find the numbers formed and add.

(a) $\begin{array}{|c|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \begin{array}{|c|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \dots + \begin{array}{|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \dots$

(b) $\begin{array}{|c|c|c|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \dots + \begin{array}{|c|c|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \dots$

(c) $\begin{array}{|c|c|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \dots + \begin{array}{|c|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \dots$

(d) $\begin{array}{|c|c|c|c|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \dots + \begin{array}{|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \dots$

(e) $\begin{array}{|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \dots + \begin{array}{|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \dots$

(f) $\begin{array}{|c|c|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \dots + \begin{array}{|c|} \hline \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \hline \end{array} \dots$

Q4. Nitya collected 34 stamps and Gauri collected 49 stamps. How many stamps did they collect in all? = 83 stamps

Q5. There were 26 beads in the string. Saumya added 5 more beads. Find the number of beads in the string now. = 31 beads

Q6. In a cricket match Mohan scored 63 runs. Aditya scored 19 runs more than Mohan. How many runs did Aditya score? = 82 runs

Adding three 1-digit numbers with regrouping

Let us learn to add $5 + 4 + 7$

T O	
①	
5	•••••
4	•••••
+ 7	•••••
1 6	

Add ones

Circle the group of dots that make 1 ten

Circle the left over dots and make ones
So, 16 ones = 1 ten and 6 ones

Let us now learn to add numbers in two different ways

Find the sum of $4 + 3 + 8$ in two different ways

I way: $(4+3)+8 = 15$

II Way: $4 + (3+8) = 15$

T O		T O	
4	•••••	①	
3	•••••	7	•••••
+ 8	•••••	+ 8	•••••
1 5		1 5	

T O		T O	
4	•••••	1 1	•••••
3	•••••	+ 4	•••••
+ 8	•••••	1 5	

Exercise 2.5



Q1. Find the sum. Look for a ten.

$$\begin{array}{r} 3 \\ 5 \\ + 7 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 6 \\ 7 \\ + 4 \\ \hline 17 \end{array}$$

$$\begin{array}{r} 8 \\ 6 \\ + 1 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 4 \\ 4 \\ + 4 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 2 \\ 7 \\ + 9 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 5 \\ 2 \\ + 6 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 8 \\ 4 \\ + 2 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 9 \\ 0 \\ + 3 \\ \hline 12 \end{array}$$

Q2. Add in two different ways.

$$\begin{array}{r} 7 \\ 3 \\ + 8 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 7 \\ 3 \\ + 8 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 8 \\ 2 \\ + 5 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 8 \\ 2 \\ + 5 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 3 \\ 6 \\ + 4 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 3 \\ 6 \\ + 4 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 9 \\ 5 \\ + 6 \\ \hline 20 \end{array}$$

$$\begin{array}{r} 9 \\ 5 \\ + 6 \\ \hline 20 \end{array}$$

$$\begin{array}{r} 4 \\ 6 \\ + 8 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 4 \\ 6 \\ + 8 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 1 \\ 7 \\ + 5 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 1 \\ 7 \\ + 5 \\ \hline 13 \end{array}$$

Rohan has 4 blue kites, 7 green kites and 5 yellow kites. Find the total number of kites he has in all. = 16 kites

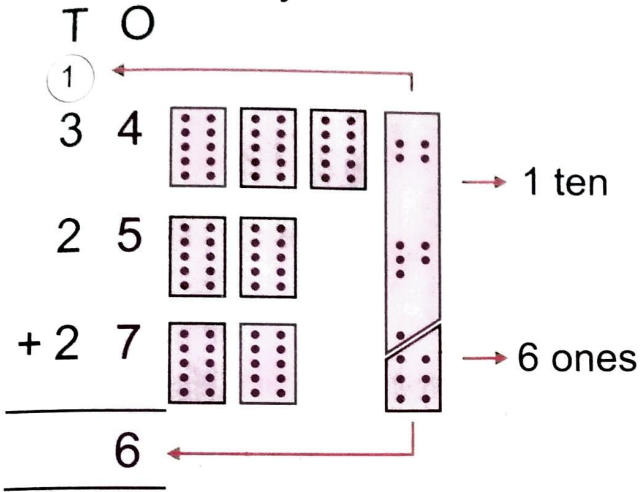
Mother purchased 6 mangoes, 4 pine apples and 2 papayas. Find the total number of fruits she purchased in all. = 12 fruits

There are 7 parrots, 2 peacocks and 3 sparrows sitting on the tree. Find the total number of birds sitting on the tree. = 12 birds

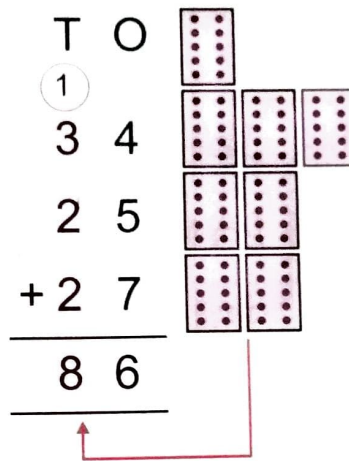
Adding three 2-digit numbers with regrouping

Let us learn to add 34, 25 and 27

Step 1: Add ones, then regroup and carry over



Step 2: Add tens



So,

T	O
①	
3	4
2	5
+ 2	7

8	6

Exercise 2.6



Q1. Add the following.

(a) $\begin{array}{r} 24 \\ 16 \\ + 49 \\ \hline 89 \end{array}$

(b) $\begin{array}{r} 13 \\ 23 \\ + 36 \\ \hline 72 \end{array}$

(c) $\begin{array}{r} 16 \\ 17 \\ + 19 \\ \hline 52 \end{array}$

(d) $\begin{array}{r} 23 \\ 24 \\ + 25 \\ \hline 72 \end{array}$

(e) $\begin{array}{r} 58 \\ 21 \\ + 19 \\ \hline 98 \end{array}$

(f) $\begin{array}{r} 29 \\ 38 \\ + 17 \\ \hline 84 \end{array}$

(g) $\begin{array}{r} 49 \\ 32 \\ + 10 \\ \hline 91 \end{array}$

(h) $\begin{array}{r} 18 \\ 29 \\ + 36 \\ \hline 83 \end{array}$

Q2. In a bus there are 26 men, 27 women and 39 children. Find the total number of persons in the bus. = 92 persons

Q3. Ritika spent ₹ 35 on a pencil box, ₹ 20 on a note book and ₹ 19 on a pen. Find the total money spent by Ritika. = ₹ 74

Q4. There are 36 blue marbles, 24 green marbles and 16 red marbles in the box. Find the total number of marbles in the box. =

76 marbles

Q5. Addition on the number grid

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Let us learn to add 42 and 26 i.e.

$$42 + 26$$

$$42 + (20 + 6)$$

- Start with 42
- Go down two boxes to reach 62
- From 62 move forward 6 steps
- You reach 68

Remember : Start with the bigger number

: It makes addition easier as further we have to move less steps