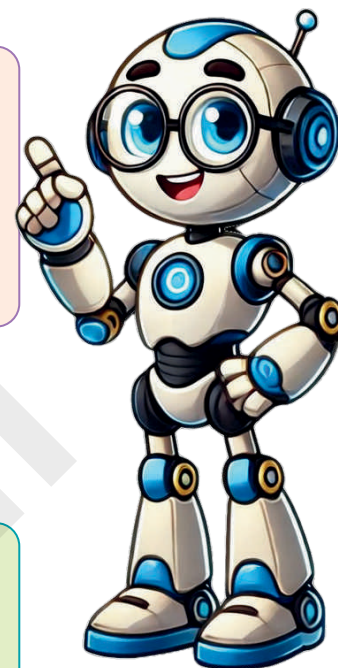




Addition

We'll cover the following key points:

- Adding Numbers (Without Carrying)
- Adding 2- digit Numbers (With Carrying)
- Adding 3-digit Numbers (With Carrying)



Hi, I'm EeeBee

Do you Remember fundamental concept in previous class:

In class 1st we learnt

- Addition
- Addition Facts
- Addition on the Number Line
- Word Problems



Still curious?
Talk to me by
scanning
the QR code.

Learning Outcomes

By the end of this chapter, students will be able to:

- Add two 2-digit numbers without carrying (e.g., $23 + 14$).
- Add two 2-digit numbers with carrying (e.g., $47 + 68$).
- Add two 3-digit numbers with carrying (e.g., $234 + 567$).
- Understand the concept of carrying when the sum of digits in a column is more than 9.
- Use place value (ones, tens, hundreds) to add numbers correctly.
- Add numbers step by step, starting from the ones place.
- Check your addition by adding numbers in a different order (commutative property).
- Solve word problems that involve addition of 2-digit and 3-digit numbers.

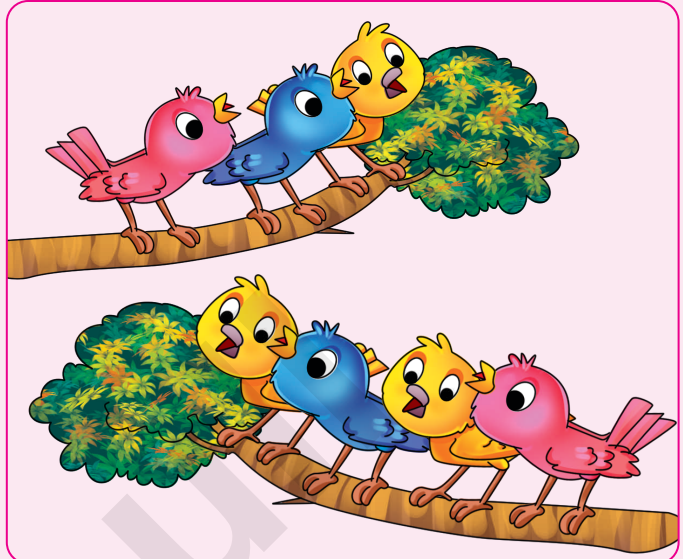


Warm Up

Describe the pictures in numbers.



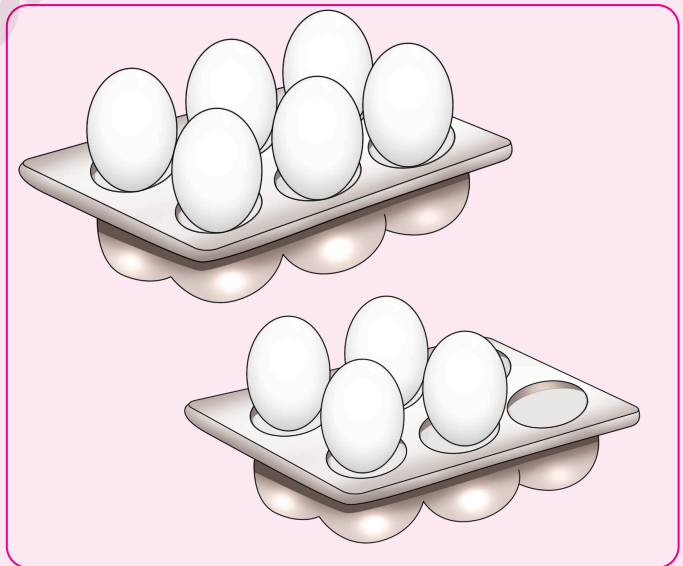
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



Simple addition

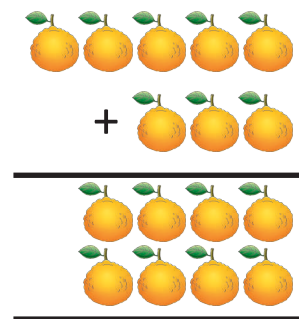
When we put things together, we do addition. Addition means to combine two or more numbers or quantities. The symbol of addition is '+'. It is called **plus** sign.

$$5 + 3 = 8$$

It is read as 5 added to 3 is 8.

or 5 plus 3 is 8.

5 and 3 are called **addends** and 8 is called **sum** or **total**.



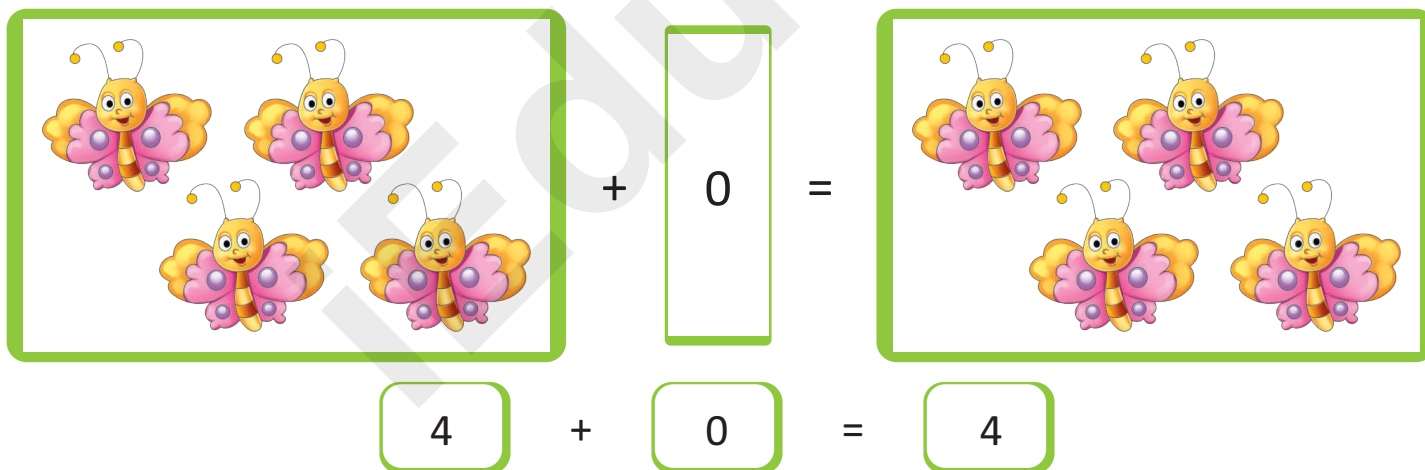
For Example:

$$\begin{array}{r} 6 \rightarrow \text{addend} \\ + \quad 3 \rightarrow \text{addend} \\ \hline 9 \rightarrow \text{sum} \end{array}$$

$$\begin{array}{ccccccc} 6 & + & 3 & = & 9 \\ \downarrow & & \downarrow & & \downarrow \\ \text{addend} & + & \text{addend} & = & \text{sum} \end{array}$$

Properties of addition.

1. When 0 is added to a number, the sum is the number itself.



2. 1 added to any number gives the successor of the number as the sum.

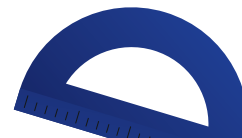
For example:

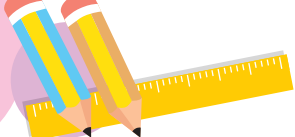
⊙ $125 + 1 = 126$

⊙ $920 + 1 = 921$

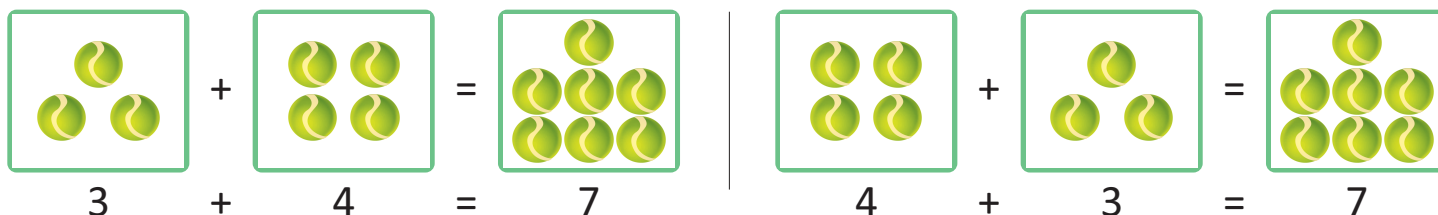
⊙ $835 + 1 = 836$

⊙ $819 + 1 = 820$





3. A change in the order of the addends does not change the sum.



Hence, $3 + 4 = 4 + 3$

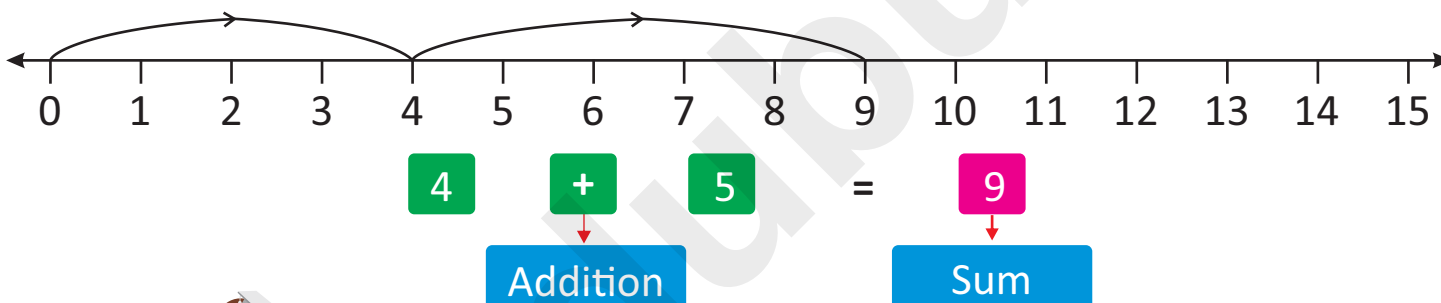
4. A change in the grouping of addends does not change the sum.

For example:

$$\begin{array}{rclclcl} 4 & + & 2 & + & 3 & = & 9 \\ 4 & + & 3 & + & 2 & = & 9 \\ 3 & + & 4 & + & 2 & = & 9 \end{array}$$

Add 4 and 5 by using number line

Start from 0, take 4 steps right, then take 5 steps more. We get 9.



REMEMBER



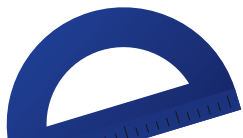
Numbers to be added together are known as addends and result of addition is known as the sum.



Exercise 3.1

1. Fill in the blanks. One has been done for you.

- (a) $7 + 5 = 12$ addends \longrightarrow 7 and 5, sum: 12
- (b) $3 + 6 = 9$ addends \longrightarrow and , sum:
- (c) $3 + 5 + 1 = 9$ addends \longrightarrow , and , sum:
- (d) $12 + 15 = 27$ addends \longrightarrow and , sum:
- (e) $7 + 3 + 8 = 18$ addends \longrightarrow , and , sum:



2. Change the order of the addends and find their sum. One has been done for you.

(a) $52 + 36$

T	O
5	2
3	6
8	8

+

T	O
3	6
5	2
8	8

(b) $37 + 12$

T	O
3	7
1	2

+

T	O
1	2
3	7

(c) $42 + 35$

T	O
4	2
3	5

+

T	O
3	5
4	2

(d) $24 + 65$

T	O
2	4
6	5

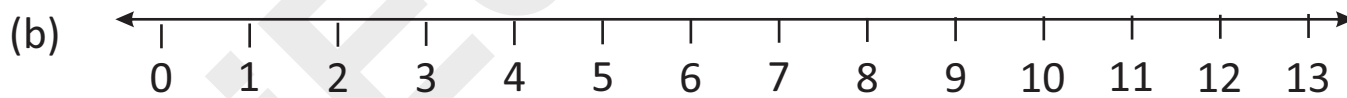
+

T	O
6	5
2	4

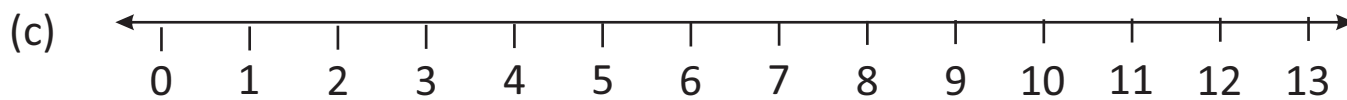
3. Add with the help of number line.



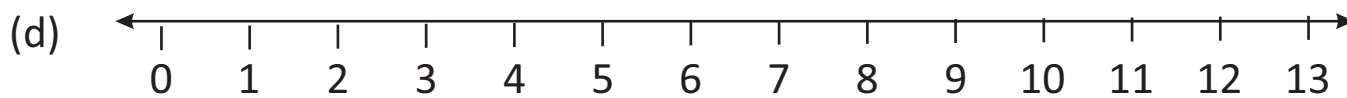
$4 + 9 = \square$



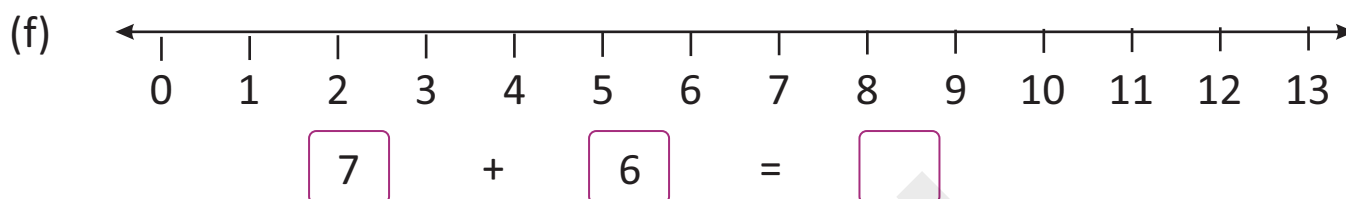
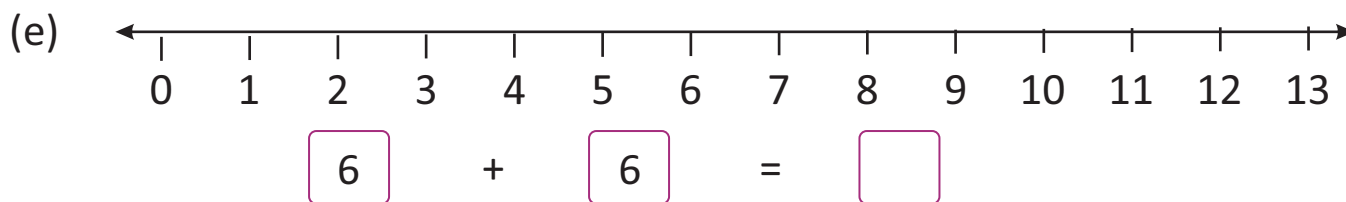
$6 + 5 = \square$



$9 + 1 = \square$



$8 + 3 = \square$



Adding Numbers (Without Carrying)

Adding 2-digit number with a 2-digit number

Example 1 : Add 54 and 23

Solution :

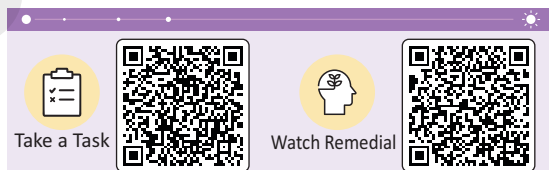
Expanded Form

54	→	5 tens + 4 ones
+ 23	→	2 tens + 3 ones
77		7 tens + 7 ones = 70 + 7 = 77

Therefore, $54 + 23 = 77$.

Short Form

T	O
5	4
2	3
7	7



Adding **ones**, i.e. $4 + 3 = 7$

Adding **tens**, i.e. $5 + 2 = 7$

Hence, the sum of 54 and 23 is 77.

Example 2 : Add 25 and 74.

Solution :

Step 1 : Add the ones. $5 + 4 = 9$
Write 9 in ones place.

Step 2 : Add the tens. $2 + 7 = 9$
Write 9 in tens place.
Thus, $25 + 74 = 99$

T	O
2	5
7	4
9	9

Adding 3 – digit number with a 3 – digit number

Example 3 : Add 325 and 651.

Solution : Expanded Form

3 2 5	→	3 hundreds + 2 tens + 5 ones
+ 6 5 1	→	6 hundreds + 5 tens + 1 one
9 7 6	→	9 hundreds + 7 tens + 6 ones = 900 + 70 + 6 = 976

Therefore, $325 + 651 = 976$.

Short Form

H	T	O
3	2	5
6	5	1
9	7	6

Adding ones, i.e. $5 + 1 = 6$

Adding tens, i.e. $2 + 5 = 7$

Adding hundreds, i.e. $3 + 6 = 9$

Hence, the sum of 325 and 651 is 976.

Example 4 : Add 412, 253 and 124.

Solution: Expanded Form

4 1 2	→	4 hundreds + 1 ten + 2 ones
+ 2 5 3	→	2 hundreds + 5 tens + 3 ones
+ 1 2 4	→	1 hundred + 2 tens + 4 ones
7 8 9	←	7 hundreds + 8 tens + 9 ones = 700 + 80 + 9 = 789

Therefore, $412 + 253 + 124 = 789$

Short Form

H	T	O
4	1	2
2	5	3
1	2	4
7	8	9

Adding ones, i.e. $2 + 3 + 4 = 9$

Adding tens, i.e. $1 + 5 + 2 = 8$

Adding hundreds, i.e. $4 + 2 + 1 = 7$

Hence, the sum of 412, 253 and 124 is 789.



Exercise 3.2

1. Add the following:

(a) 351 and 232

H	T	O
3	5	1
2	3	2
5	8	3

Answer :

(b) 415 and 263

H	T	O
4	1	5
2	6	3

Answer :

(c) 207 and 332

H	T	O
2	0	7
3	3	2

Answer :

(d) 572 and 227

H	T	O
5	7	2
2	2	7

Answer :

(e) 275 and 312

H	T	O
2	7	5
3	1	2

Answer :

(f) 322 and 134

H	T	O
3	2	2
1	3	4

Answer :

(g) 603 and 80

H	T	O
6	0	3
	8	0

Answer :

(h) 465 and 104

H	T	O
4	6	5
1	0	4

Answer :

(i) 703 and 262

H	T	O
7	0	3
2	6	2

Answer :

2. Tick (✓) the correct and cross (✗) the wrong.

(a) $403 + 93 = 596$

☐

(b) $203 + 63 = 266$

☐

(c) $222 + 463 = 685$

☐

(d) $420 + 80 = 490$

☐

(e) $111 + 333 = 555$

☐

(f) $335 + 115 = 450$

☐

(g) $0 + 290 = 390$

☐

(h) $115 + 220 = 335$

☐

(i) $506 + 12 = 519$

☐

(j) $219 + 131 = 360$

☐

3. Add the following:

(a)

	H	T	O
	2	3	3
+	1	2	2
+	3	3	1

(b)

	H	T	O
	4	1	2
+	5	0	3
+	0	4	4

(c)

	H	T	O
	3	4	0
+	1	0	2
+	2	3	4

(d)

	H	T	O
	4	0	3
+	2	0	1
+	1	8	2

(e)

	H	T	O
	5	2	2
+	1	3	3
+	2	0	1

(f)

	H	T	O
	3	2	7
+	2	5	1
+	4	0	1

(g)

	H	T	O
	2	5	6
+	3	1	1
+	2	2	0

(h)

	H	T	O
	3	1	7
+	4	0	1
+	1	8	0

(i)

	H	T	O
	2	0	5
+	3	9	1
+	4	0	2

Adding 2- digit Numbers (With Carrying)

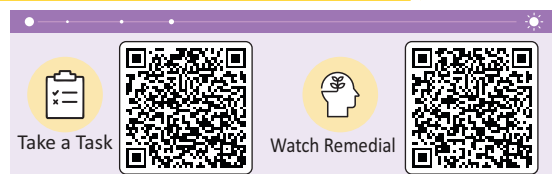
Example 1 : Add 43 and 29.

Solution : Expanded Form

T	O
4	3
2	9

$$\begin{aligned} &\rightarrow 4 \text{ tens} + 3 \text{ ones} \\ &\rightarrow 2 \text{ tens} + 9 \text{ ones} \\ &= 6 \text{ tens} + 12 \text{ ones} \\ &= 6 \text{ tens} + 10 \text{ ones} + 2 \text{ ones} \\ &= 6 \text{ tens} + 1 \text{ ten} + 2 \text{ ones} \\ &= 7 \text{ tens} + 2 \text{ ones} \\ &= 70 + 2 = 72 \end{aligned}$$

Hence, $43 + 29 = 72$.



Short Form

	T	O
43	4	3
+ 29	2	9
	7	2

Carry → 1

Example 2 : Add 58 and 27.

Solution :

Step 1 : Add the ones $8 \text{ ones} + 7 \text{ ones} = 15 \text{ ones}$
 $= 1 \text{ ten} + 5 \text{ ones}$

Write 5 in the **ones** column and carry 1 ten to the tens column.

Step 2 : Add the tens.

$5 + 2 + 1 \text{ (carry over)} = 8$

Write 8 in the tens column.

Thus, $58 + 27 = 85$

T	O
5	8
2	7
8	5



Exercise 3.3

1. Fill in the boxes.

- (a) 22 tens + 14 ones = tens + ones
- (b) 14 tens + 21 ones = tens + ones
- (c) 12 tens + 14 ones = tens + ones
- (d) 8 tens + 10 ones = tens + ones

2. Add the following. One has been done for you.

(a)

	T	O
	2	5
+	3	8
	6	13

$$25 + 38 = 63$$

(b)

	T	O
	4	8
+	2	9

$$48 + 29 = \square$$

(c)

	T	O
	3	2
+	5	8

$$32 + 58 = \square$$

(d)

	T	O
	6	5
+	3	9

$$65 + 39 = \square$$

(e)

	T	O
	5	8
+	2	4

$$58 + 24 = \square$$

(f)

	T	O
	2	8
+	5	8

$$28 + 58 = \square$$

(g)

	T	O
	3	9
+	8	6

$$39 + 86 = \square$$

(h)

	T	O
	8	5
+	3	6

$$85 + 36 = \square$$

(i)

	T	O
	2	9
+	4	3

$$29 + 43 = \square$$

3. Add by expanded forms. One has been done for you.

(a) Add 48 and 29.

$$\begin{array}{l}
 48 = 4 \text{ tens} + 8 \text{ ones} \\
 + 29 = 2 \text{ tens} + 9 \text{ ones} \\
 \hline
 \text{Sum} = 6 \text{ tens} + 17 \text{ ones} \\
 = 7 \text{ tens} + 7 \text{ ones} \\
 48 + 29 = 77
 \end{array}$$

(b) Add 55 and 39.

$$\begin{array}{l}
 55 = \square \text{ tens} + \square \text{ ones} \\
 + 39 = \square \text{ tens} + \square \text{ ones} \\
 \hline
 \text{Sum} = \square \text{ tens} + \square \text{ ones} \\
 = \square \text{ tens} + \square \text{ ones} \\
 55 + 39 = \square
 \end{array}$$

(c) Add 64 and 27.

$$64 = \square \text{ tens} + \square \text{ ones}$$

$$+ 27 = \square \text{ tens} + \square \text{ ones}$$

$$\text{Sum} = \square \text{ tens} + \square \text{ ones}$$

$$= \square \text{ tens} + \square \text{ ones}$$

$$64 + 27 = \square$$

(d) Add 87 and 18.

$$87 = \square \text{ tens} + \square \text{ ones}$$

$$+ 18 = \square \text{ tens} + \square \text{ ones}$$

$$\text{Sum} = \square \text{ tens} + \square \text{ ones}$$

$$= \square \text{ tens} + \square \text{ ones}$$

$$87 + 18 = \square$$

4. Match the following:

(a) A pencil box contains 42 pencils. Another box contains 25 pencils. Find the total number of pencils in the two boxes.

(i) 173

(b) Supriya has 52 stamps. She collects 26 stamps more. How many stamps does she have now?

(ii) 67

(c) Ashok had 97 marbles. Ranjan give him 76 marbles more. How many marbles do they have now?

(iii) 78



Mental Math

Add the following :

(a)

T

O

$$\begin{array}{r} 3 \quad 3 \\ + 2 \quad 9 \\ \hline \end{array}$$

$$33 + 29 = \square$$

(b)

T

O

$$\begin{array}{r} 2 \quad 8 \\ + 6 \quad 4 \\ \hline \end{array}$$

$$28 + 64 = \square$$

(c)

T

O

$$\begin{array}{r} 3 \quad 4 \\ + 3 \quad 9 \\ \hline \end{array}$$

$$34 + 39 = \square$$

Add by expanded forms.



Critical Thinking

(a) Add 65 and 28.

$$\begin{aligned} 65 &= \square \text{ tens} + \square \text{ ones} \\ + 28 &= \square \text{ tens} + \square \text{ ones} \\ \text{Sum} &= \square \text{ tens} + \square \text{ ones} \\ &= \square \text{ tens} + \square \text{ ones} \\ 65 + 28 &= \square \end{aligned}$$

(b) Add 47 and 38.

$$\begin{aligned} 47 &= \square \text{ tens} + \square \text{ ones} \\ + 38 &= \square \text{ tens} + \square \text{ ones} \\ \text{Sum} &= \square \text{ tens} + \square \text{ ones} \\ &= \square \text{ tens} + \square \text{ ones} \\ 47 + 38 &= \square \end{aligned}$$

Solve it.



Experiential Learning

Write all the number pair from the given grid that give a sum of 100.
One has been done for you.

95	35	3	25	(a) $95 + 5 = 100$
97	75	55	85	(b) _____
45	15	5	80	(c) _____
65	20	30	70	(d) _____

(e) _____
(f) _____
(g) _____
(h) _____

Adding 3-digit Numbers (With Carrying)

Example 1 : Add 476 and 349.

Solution : Expanded Form

$$\begin{aligned} 476 &\rightarrow 4 \text{ hundreds} + 7 \text{ tens} + 6 \text{ ones} \\ + 349 &\rightarrow 3 \text{ hundreds} + 4 \text{ tens} + 9 \text{ ones} \\ \hline &7 \text{ hundreds} + 11 \text{ tens} + 15 \text{ ones} \\ &= 7 \text{ hundreds} + 11 \text{ tens} + 10 \text{ ones} + 5 \text{ ones} \\ &= 7 \text{ hundreds} + 11 \text{ tens} + 1 \text{ ten} + 5 \text{ ones} \end{aligned}$$



$$\begin{aligned}
 &= 7 \text{ hundreds} + 12 \text{ tens} + 5 \text{ ones} \\
 &= 7 \text{ hundreds} + 10 \text{ tens} + 2 \text{ tens} + 5 \text{ ones} \\
 &= 7 \text{ hundreds} + 1 \text{ hundred} + 2 \text{ tens} + 5 \text{ ones} \\
 &= 8 \text{ hundreds} + 2 \text{ tens} + 5 \text{ ones} \\
 &= \boxed{800} + \boxed{20} + \boxed{5} = \boxed{825}
 \end{aligned}$$

Short Form

$$\begin{array}{r}
 4 \ 7 \ 6 \\
 + \ 3 \ 4 \ 9 \\
 \hline
 8 \ 2 \ 5
 \end{array}$$

H	T	O
$\boxed{1}$	$\boxed{1}$	
4	7	6
+ 3	4	9
8	$\boxed{1}$ 2	$\boxed{1}$ 5

Hence, $476 + 349 = 825$.

Example 2 : Add 289 and 564.

Solution :

Step 1 : Add the ones place.

$$9 + 4 = 13 \text{ ones} = 1 \text{ ten} + 3 \text{ ones.}$$

write 3 in the ones place and carry over 1 ten to the tens place.

$$\begin{array}{r}
 \text{H} \quad \text{T} \quad \text{O} \\
 \textcircled{1} \quad \textcircled{1} \quad \\
 2 \quad 8 \quad 9 \\
 + \ 5 \quad 6 \quad 4 \\
 \hline
 8 \quad 5 \quad 3
 \end{array}$$

Step 2 : Add the tens place.

$$8 + 6 + 1 \text{ (carry over)} = 15 \text{ tens} = 1 \text{ hundred} + 5 \text{ tens.}$$

Write 5 in tens place and carry over 1 hundred to the hundreds place.

Step 3 : Add the hundreds place.

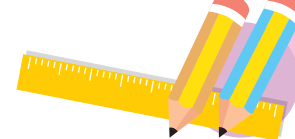
$$2 + 5 + 1 \text{ (carry over)} = 8 \text{ hundreds.}$$

Write 8 in the hundred place.

$$\text{Thus, } 289 + 564 = 853.$$



Exercise 3.4



1. Add the following. One has been done for you.

(a)

H	T	O
1	1	
4	5	6
+	3	8
8	1	4
	1	5

845

(b)

H	T	O
4	8	6
+	3	4

(c)

H	T	O
3	7	6
+	2	4

2. Add the following. One has been done for you.

(a)

H	T	O
1	1	
4	3	4
+	3	8
8	2	0

(b)

H	T	O
5	4	5
+	4	7

(c)

H	T	O
4	7	6
+	2	7

(d)

H	T	O
7	5	6
+	3	4

(e)

H	T	O
3	5	6
+	3	8

(f)

H	T	O
3	3	4
+	1	9

(g)

H	T	O
2	2	4
+	3	8

(h)

H	T	O
6	7	6
+	3	8

(i)

H	T	O
5	4	5
+	2	9

LET US SUMMARIZE

- Addition means to combine two or more numbers or quantities.
- When 0 is added to a number, the sum is the number itself.
- A change in the grouping of addends does not change the sum.
- Numbers to be added together are known as addend and result of addition is known as the sum.



Gap Analyzer™



Think Tank



1. Tick (✓) the correct answer.

(a) $375 + 285 =$ _____.

(i) 760

☐

(ii) 660

☐

(iii) 860

☐

(b) $834 +$ _____ $= 834$

(i) 0

☐

(ii) 1

☐

(iii) 2

☐

(c) 4 added 9 times = _____.

(i) 63

☐

(ii) 36

☐

(iii) 93

☐

(d) 503 plus 221 = _____.

(i) 427

☐

(ii) 274

☐

(iii) 724

☐

2. Fill in the blanks.

(a) _____ $+ 56 = 100$

(b) $100 + 36 =$ _____

(c) _____ $+ 136 = 200$

(d) $35 + 165 =$ _____

(e) $125 +$ _____ $=$ _____ $+ 925$

(f) $345 +$ _____ $= 445$

3. Match the following:

(a) $41 + 2$

(i) 86

(b) Add 49 to 37

(ii) 56

(c) 7 added 3 times

(iii) 43

(d) 20 plus 36

(iv) 21



Custom Learning Path

Scan to Create
Your Own
Learning Path



Math Puzzle



Fill in the blanks of each crossword puzzle to make the addition equation true.

26	+		=	51
			+	
	+	32	=	
			=	
23	+	98	=	

	+	72	=	
+				
66	+	47	=	
=				



Critical Thinking



Mental Math

Fill in the blanks.

1. 9 added 2 times = _____

2. Add 45 and 8 tens = _____

3. 123 and 15 tens = _____

4. $97 + \underline{\hspace{2cm}} = 200$

Add the following:



Experiential Learning

1.

	H	T	O
	○	○	○
	5	4	8
+	2	9	6
<hr/>			
<hr/>			

2.

	H	T	O
	○	○	○
	4	8	9
+	1	9	9
<hr/>			
<hr/>			

3.

	H	T	O
	○	○	○
	2	6	8
+	2	7	7
<hr/>			
<hr/>			

4.

	H	T	O
	○	○	○
	3	9	7
+	1	8	6
<hr/>			
<hr/>			

5.

	H	T	O
	○	○	○
	3	8	4
+	2	9	9
<hr/>			
<hr/>			

6.

	H	T	O
	○	○	○
	4	8	7
+	2	9	5
<hr/>			
<hr/>			



Fun Time Activity

Count and write the correct answers.

<div>•</div>	<div>• •</div>		
<div></div>	+	<div></div>	= <div></div>

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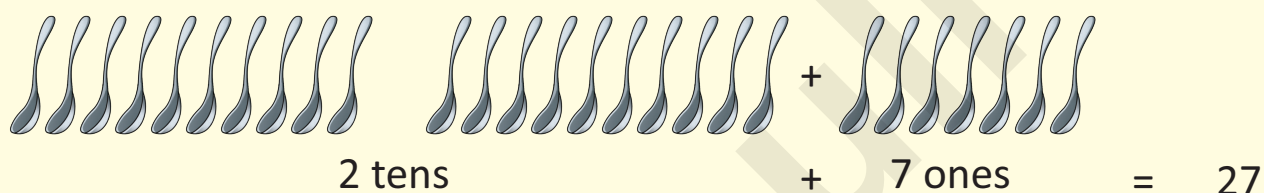


Objective : To understand the concept of addition with regrouping.

Materials Required : Ice-cream spoons (30 per student) and rubber bands.

Procedure :

- The activity is to be done in pairs.
- The partners together will have 60 ice-cream spoons kept on the desk.
- The teacher will write an addition sum on the blackboard, say $27 + 14$.
- One child will take 27 spoons. He will make 2 bundles of 10 spoons each and will keep 7 spoons side the bundles.



- The partner will take 14 spoons. He will make 1 bundle of 10 spoons and will keep 4 spoons besides the bundle.

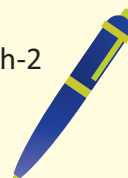
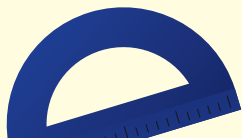
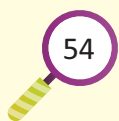


- Now, to add the two numbers, 3 bundles of 10 each will be kept together and the loose spoons will be kept together and added, e.g. $7 \text{ ones} + 4 \text{ ones} = 11 \text{ ones}$.
- From the 11 spoons, 1 bundle of 10 will be made and 1 spoon will be kept beside the 4 bundles of 10 spoons. The sum is then noted.



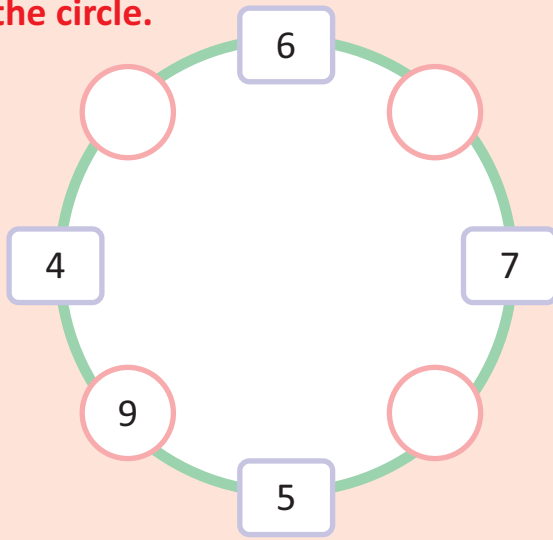
Hence, $27 + 14 = 41$

Then, the teacher will write another sum on the blackboard and the activity will continue for at least 10 sums.

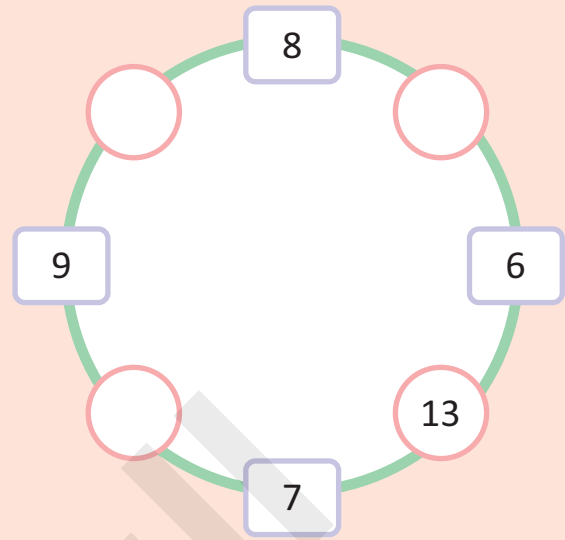




Fill in the circle.



Critical Thinking



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