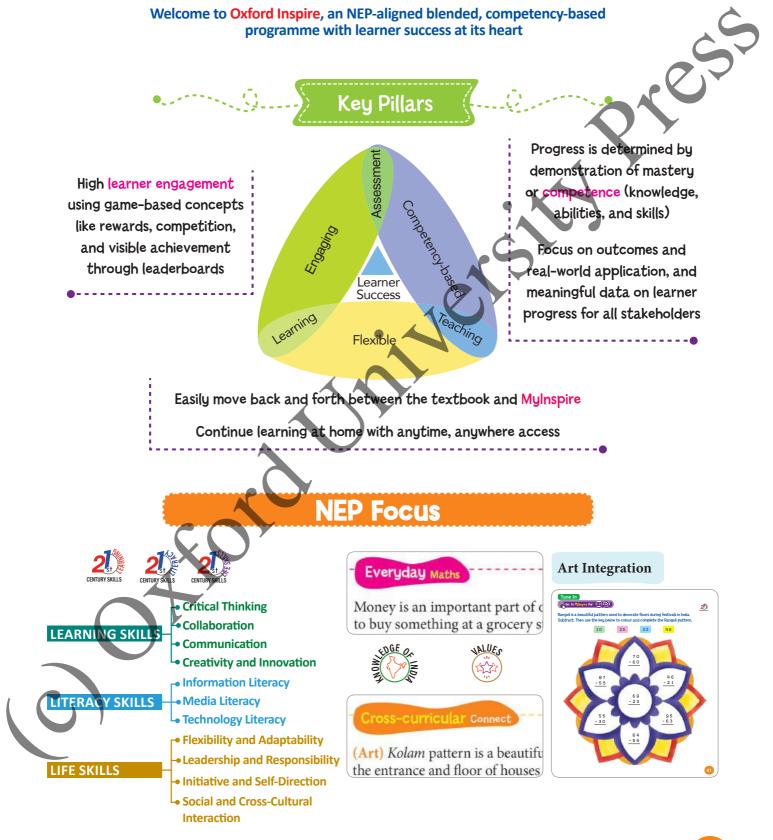
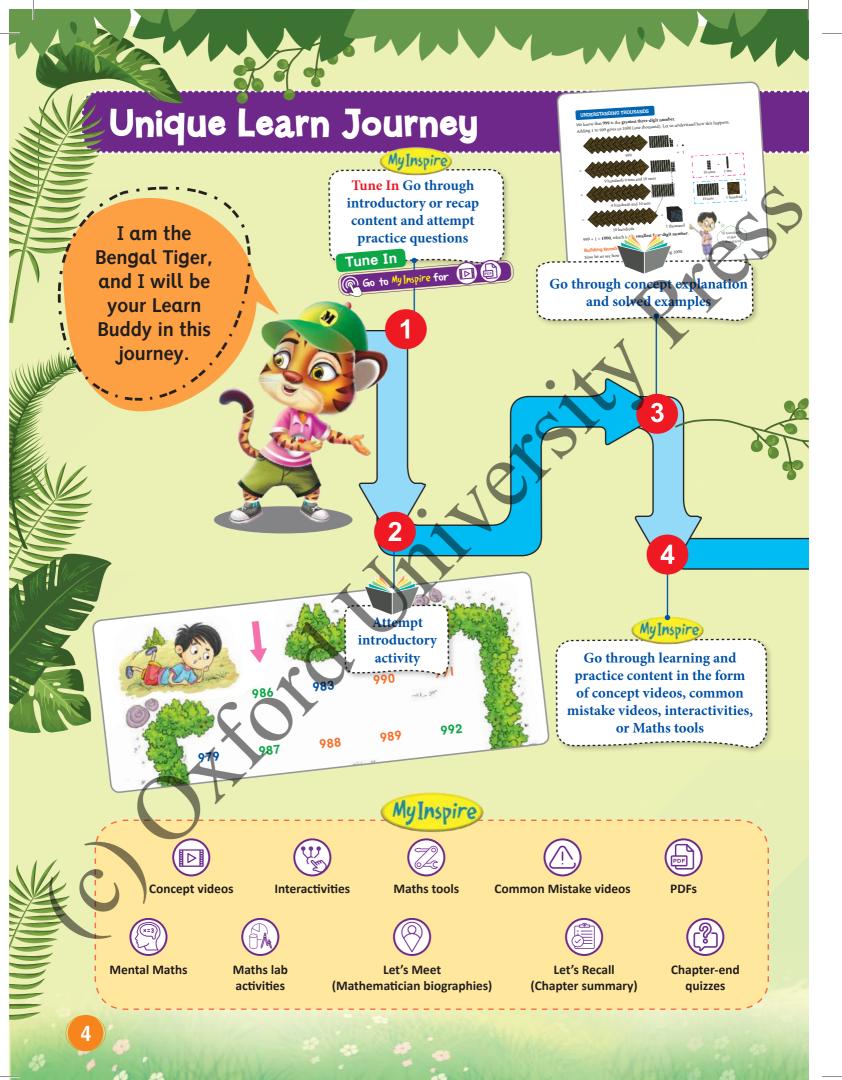
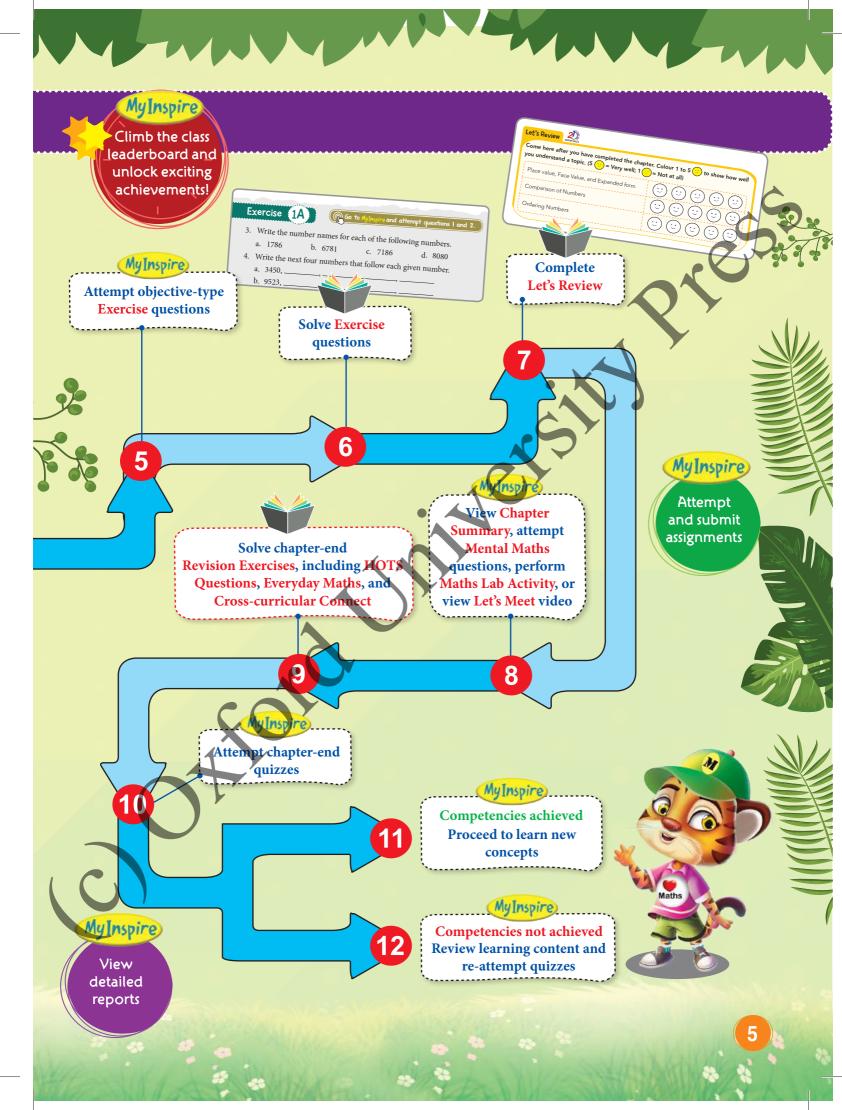




#### Welcome to Oxford Inspire, an NEP-aligned blended, competency-based programme with learner success at its heart









## **ADDITION OF TWO-DIGIT NUMBERS**

While adding if the number of ones is more than 9, then we regroup **10 ones** as **1 ten** and then add. Let us look at some examples.

**Example 1:** The National Museum in New Delhi is one of the largest museums in India. The students of Class 3 went on a field trip to the National Museum. There were 29 students from Class 3A and 33 students from Class 3B. How many students went to the museum in all?

*Solution:* To find the total number of students who went to the museum we will add 29 and 33.

We add by writing the numbers one below the other as per their place values.

	Т	0	<b>Step 1:</b> Add the digits in the ones place, $9 + 3 = 12$ ones.
	<sup>1</sup> 2	9	
+	3	3	
		2	Regroup 12 ones as 1 ten and 2 ones. Write 2 in the ones place and carry over 1 to the tens place.
	Т	0	<b>Step 2:</b> Add the digits in the tens place, $1 + 2 + 3 = 6$ tens.
	<sup>1</sup> 2	9	
+	3	3	
	6	2	Write 6 in the tens place.

So, 62 students went on a field trip to the National Museum. The answer obtained on addition is called the **sum**. In this case, the sum is 62. The numbers that are added are known as **addends**. Here 29 and 33 are the addends.

*Example 2:* Add: 73 + 97 + 12

7

2

2

8

*Solution:* First write the numbers one below the other as per their place values.

- Step 1: Add the digits in the ones place, 3 + 7 + 2 = 12 ones. Regroup 12 ones as 1 ten and 2 ones. Write 2 in the ones place and carry over 1 to the tens place.
- Step 2: Add the digits in the tens place, 1 + 7 + 9 + 1 = 18 tens. 18 tens = 1 hundred and 8 tens. Write 8 in the tens place and 1 in the hundreds place.

Thus, the sum is 182.





1. Add the following.

e. 43 + 29

a.	Т	0	b.	Т	0	
	5	9		2	2	
+	2	1	+	6	8	



d.

Н

Т

5

4 9 0

6

# Application Based Questions

 Sanjay bought a box of crayons for ₹34 and a notebook for ₹72. How much money did he spend in all?

f. 32 + 12 + 42

3. Sahiba loves collecting superhero Legos. She has kept 45 of her favourite Legos in a big box. One morning, she keeps another 56 Legos in the box. How many superhero Legos are there in the box now?

# ADDITION OF THREE-DIGIT NUMPERS

Let us learn to add three-digit numbers.

# Addition without Regrouping

**Example 3:** Madhubani is a style of painting from the Mithila region of Bihar and Jharkhand. In an art show organised by a school, 130 Madhubani paintings and 320 clay pot paintings were put on display. How many paintings were put on display in all?

*Solution*: To find the number of paintings put on display in all we will add 130 and 320.

H	Т	0	
1)	3	0	
3	2	0	
4	5	0	
	1) 3	1) 3 3 2	1)     3     0       3     2     0

**Step 1:** Add the digits in the ones place, 0 + 0 = 0 ones. Write 0 in the ones place.

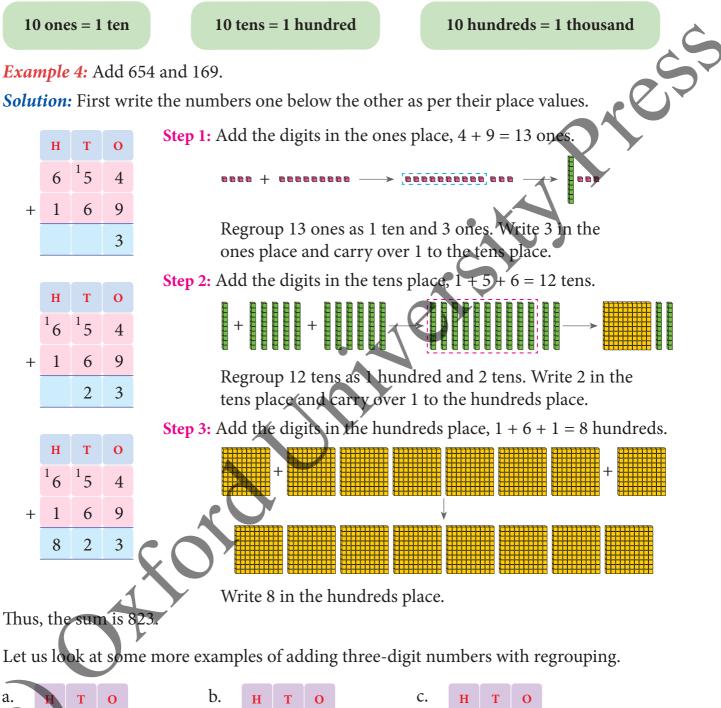
- **Step 2:** Add the digits in the tens place, 3 + 2 = 5 tens. Write 5 in the tens place.
- **Step 3:** Add the digits in the hundreds place, 1 + 3 = 4 hundreds. Write 4 in the hundreds place.

The sum is 450. So, a total of 450 paintings were put on display at the art show.



# **Addition with Regrouping**

While adding if the number of ones, tens, or hundreds is more than 9, then we have to regroup to add.



a.	Н	Т	0
	1	<sup>1</sup> 3	5
+	6	5	7
	7	9	2

	н	Т	ο
	<sup>1</sup> 4	9	3
+	2	7	2
	7	6	5

•	Н	Т	0
	$^{1}4$	<sup>2</sup> 0	7
	3	8	9
+	1	7	6
	9	7	2

### *Example 5:* Add 456 and 739.

*Solution:* First write the numbers one below the other as per their place values.

	Th	н	Т	ο
		4	<sup>1</sup> 5	6
+		7	3	9
	1	1	9	5

- Step 1: Add the digits in the ones place, 6 + 9 = 15 ones. Regroup 15 ones as 1 ten and 5 ones. Write 5 in the ones place and carry over 1 to the tens place.
- **Step 2:** Add the digits in the tens place, 1 + 5 + 3 = 9 tens. Write 9 in the tens place.
- Step 3: Add the digits in the hundreds place, 4 + 7 = 11 hundreds. Regroup 11 hundreds as 1 thousand and 1 hundred. Write 1 in the hundreds place and 1 in the thousands place.

Thus, the sum is 1195.

3

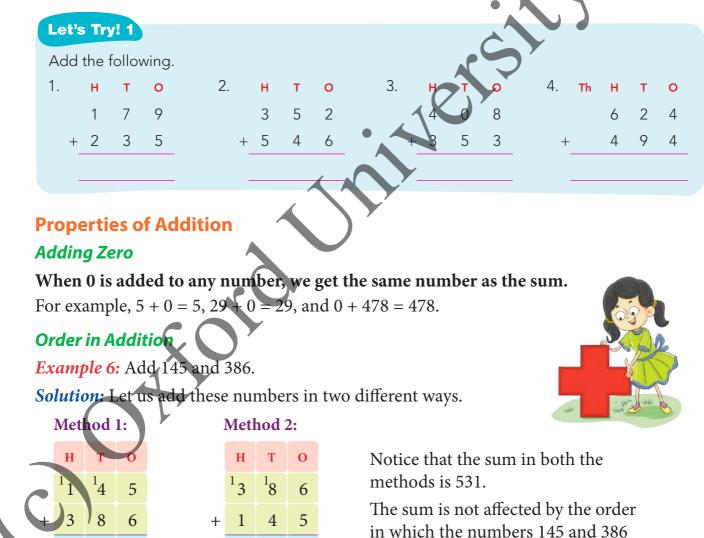
5

1

5

3

1

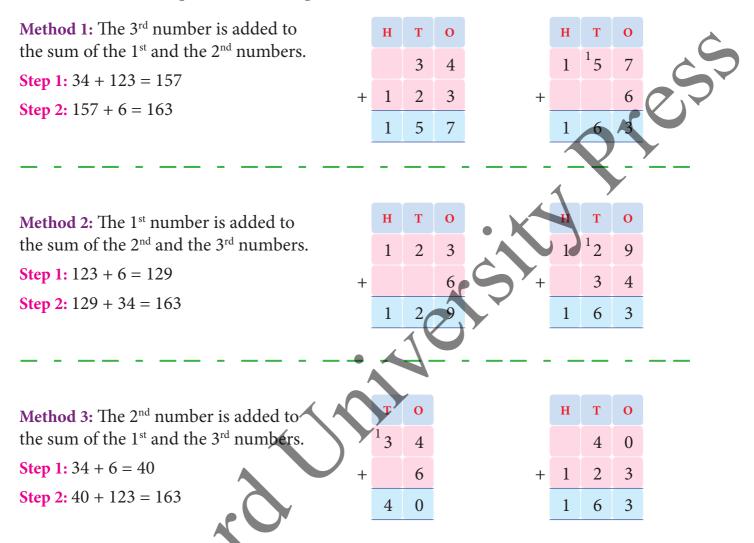


Thus, the sum of two numbers remains the same in whichever order the numbers are added.

are added.

*Example 7:* Add: 34 + 123 + 6

*Solution:* We will add the numbers in three different ways. In all the three methods, first write the numbers as per their correct place values.



Thus, when three or more numbers are added, the sum remains the same even if the order in which the numbers are added is changed.

**Key Points** 

- Adding 0 to a number always gives the same number as the sum.
  - The sum of two or more numbers does not change even if we change the order in which the numbers are added.

Go to MyInspire for



# Let's Try! 2

Fill in the blanks.

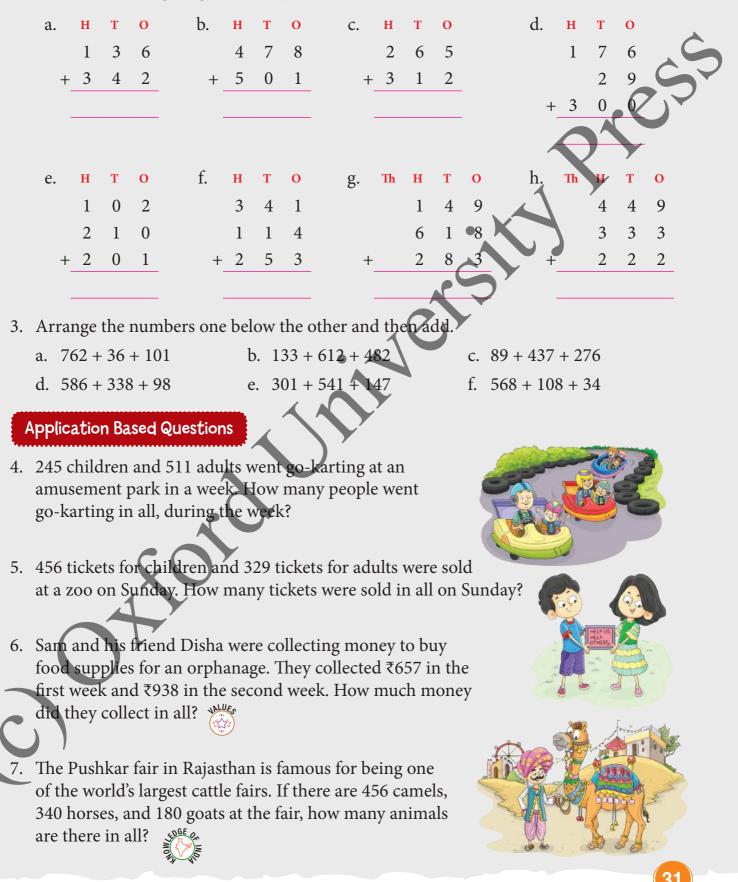
- 1. 154 + 0 = \_\_\_\_\_
- 2. 23 + 12 = \_\_\_\_ + 23
- 3. 0 + 99 = \_\_\_\_
- 4. 10 + 30 + 50 = 30 + 50 + \_\_\_\_

30



@ Go to MyInspire and attempt question I.

2. Add the following. Regroup if required.



## **ADDITION OF FOUR-DIGIT NUMBERS**

The steps for adding four-digit numbers are similar to the steps for adding two-digit and three-digit numbers. Let us look at a few examples.

### **Addition without Regrouping**

*Example 8:* Add 4567 and 1232.

*Solution:* First write the numbers one below the other as per their place values.

	Th	Н	Т	0
	4	5	6	7
+	1	2	3	2
	5	7	9	9

- **Step 1:** Add the digits in the ones place, 7 + 2 = 9 ones. Write 9 in the ones place.
- **Step 2:** Add the digits in the tens place, 6 + 3 = 9 tens. Write 9 in the tens place.
- **Step 3:** Add the digits in the hundreds place, 5 + 2 = 7 hundreds. Write 7 in the hundreds place.

**Step 4:** Add the digits in the thousands place, 4 + 1 = 5 thousands. Write 5 in the thousands place.

Thus, the sum is 5799.

# Addition with Regrouping

**Example 9:** The amazing boat races of Kerala attract many tourists every year. 1267 people from Mumbai and 1943 people from Delhi went to watch the boat races. How many people in all went from these two cities? **Solution:** We will add 1267 and 1943 to find the

total number of people who went to watch the boat races.

**Step 1:** Add the digits in the ones place, 7 + 3 = 10 ones. Regroup 10 ones as 1 ten and 0 ones. Write 0 in the ones place and carry over 1 to the tens place.

**Step 2:** Add the digits in the tens place, 1 + 6 + 4 = 11 tens. Regroup 11 tens as 1 hundred and 1 ten. Write 1 in the tens place, and carry over 1 to the hundreds place.

**Step 3:** Add the digits in the hundreds place, 1 + 2 + 9 = 12 hundreds. Regroup 12 hundreds as 1 thousand and 2 hundreds. Write 2 in the hundreds place and carry over 1 to the thousands place.

**Step 4:** Add the digits in the thousands place, 1 + 1 + 1 = 3 thousands. Write 3 in the thousands place.

Thus, the sum is 3210. So, a total of 3210 people went to watch the boat races from Mumbai and Delhi.



	Th	н	Т	0
	<sup>1</sup> 1	<sup>1</sup> 2	<sup>1</sup> 6	7
+	1	9	4	3
	3	2	1	0

#### Key Points

- 10 ones = 1 ten
- 10 tens = 1 hundred
- 10 hundreds = 1 thousand

Let us look at some more examples of adding four-digit numbers with regrouping.

	a.	Th	Н	Т	0																		
		1	<sup>1</sup> 2	<sup>1</sup> 3	4			Wa	tch	Out	1												
	+	3	4	9	8							umber	s wit	h dif	foror	at pu	umbe	or of	dia	ite r	nake	<b>`</b>	~
		4	7	3	2	-						mbers											5
			,			_						igits.											D
	b.	Th	н	Т	0				Th	Н						Th	<b>Н</b> 1-	т 1,	0		• K		
		<sup>1</sup> 4	<sup>2</sup> 5	<sup>2</sup> 8	9				1	2						1	<sup>1</sup> 2	6	8				
			5	7	6			+	2	4			- (x)		+	1	2	4			$\sim$		
	+			8	8				5	0	0	0	_ (~	)	_	1	5		0		• )		
		5	2	5	3	_									•								
															$\sim$				1				
	P	Go t	to My	Inspir	e for											)							
	0												C			•							
													1										
	Exe	erci	se	20	C	ļ.																	
	1. 4	Add	the	follo	wing	g. Reg	grou	ıp if	requ	uire	d.	$\bigcirc$											
				н			b.	Th	Ĥ	Т	0	c.	Th	н	Т	0	d	•	Th	н	Т	0	
			1	4	5	3		5	0	6	5		8	1	0	8			7	6	0	8	
		+_	2	1	3	6	÷	4	9	2	3	-	F	6	9	1	_	+_	1	5	6	2	
		_					P	U									-						
	e	e. 7	768	+ 95	4		f.	2113	8 + 6	6436	•	g.	700	7 +	121	5	h	n. 1	631	+ 7	7358	5	
	2. 4	Add	the	follo	wing	g. Reg	groi	ıp if	requ	uire	d.												
	i	a.	Th	H	Т	0	b.	Th	н	Т	0	с.	Th	н	Т	0	d	•	Th	н	Т	0	
		(	7	1		3			2	8	7		2	6	4	9			2	0	7	0	
				1		3		4	1	0	1		1	8	7	4			1	5	4	3	
		+_		2	3	4	+		6	1	0	-	F	5	4	7	-	+_	5	4	1	9	
,		<b>\</b> -															-	_					
		e. )	Th				f.	Th	H	T 2	0	g.	Th	H	T	0	h	•	Th	H	T	0	
			1	3 1		5 1		1 4	2 0	3 0	1 0		2	9 7	0 6	0 5			5	4 1	2 0	1 0	
		+	3			0	+	2	0	0	1	4		6	6	6		+	1	0	0	0	
			-	~	~				Ū	0	-			U	0	0	-	-	-				
																	-	_					

- 3. Arrange the numbers one below the other and then add.
  - a. 2676 + 342 + 6754 b. 4225 + 3002 + 631
  - d. 208 + 8561 + 110
- e. 1234 + 2345 + 4567
- c. 7654 + 665 + 432
  f. 564 + 1100 + 333

- Application Based Questions
- 4. Mango is the national fruit of India. From a mango orchard, mangoes were plucked from 2312 trees on the first day and from 3619 trees on the second day. From how many trees were the mangoes plucked in these two days?
- 5. There are 4356 people in a village. The neighbouring village has 2110 more people than the first village. How many people are there in the second village?
- 6. For a three-day cricket match, 874 tickets were sold on the first day, 1245 tickets were sold on the second day, and 2500 tickets were sold on the third day. How many tickets were sold in all?
- 7. Sam is playing the role of a wizard in a school play. He buys a cloak for ₹1530 and a wand for ₹785. How much money did he spend in all?



Read the word problem given below.

Rita gave 7 storybooks to her friend Amit. Now she has 14 storybooks. How many storybooks did she have in the beginning?

We can write an addition statement for this word problem as follows.

+



# Storybooks Rita has now

14

Storybooks Rita gave to Amit

7

Adding these numbers will give us the number of storybooks Rita had in the beginning.

Now let us look at some examples of framing addition word problems.

14 boys and 17 girls in a swimming class at school

There are 14 boys and 17 girls in a swimming class at school. How many students are there in the swimming class in all?



**b.** 9 + 13

Several different word problems can be framed for this addition statement. One of them is given below.

Rohan donated 9 toys and his friend David donated 13 toys for the children of a village. How many toys did they donate altogether?

Try framing another word problem in the space below.

@ Go to MyInspire for **▷** 



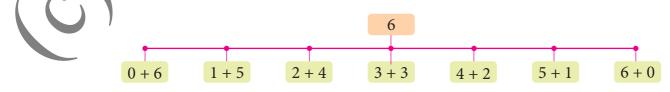
# Frame addition word problems for the following.

- 1. A parking lot has 23 cars and 48 motorcycles.
- 2. The first half of a school basketball match was 12 minutes long and the second half was 15 minutes long.
- 3. A writer wrote 560 words in the morning and another 380 words in the evening to finish his short story.
- 4. 55 + 18
- 5. 45 + 25

# STRATEGIES FOR ADDITION

In this section we will learn some useful strategies for adding numbers. Let us first revise how we can express a number as the sum of two numbers in different ways.

The chart below shows all the different ways of writing 6 as the sum of two numbers. These facts are called the **addition facts** for 6.



In the same manner, we can write the addition facts for any number.

Given below are all the addition facts for the number 10.

0 + 10 = 10	10 + 0 = 10
1 + 9 = 10	9 + 1 = 10
2 + 8 = 10	8 + 2 = 10
3 + 7 = 10	7 + 3 = 10
4 + 6 = 10	6 + 4 = 10
5 + 5 = 10	

Try writing all the addition facts for the number 15.

How many facts did you get?

.e.

## Adding a Number to Itself (Doubles)

When a number is added to itself, the sum obtained is called its **double**.

+	0	1	2	3	4	5	6	7	8	9	10	
0	0	1	2	3	4	5	6	7	8	9	10	
1	1	2	3	4	5	6	7	8	9	10	11	
2	2	3	4	5	6	7	8	9	10	11	12	
3	3	4	5	6	7	8	9	10	11	12	13	
4	4	5	6	7	8	9	10	11	12	13	14	
5	5	6	7	8	9	10	11	12	13	14	15	
6	6	7	8	9	10	11	12	13	14	15	16	
7	7	8	9	10	11	12	13	14	15	16	17	
8	8	9	10	11	12	13	14	15	16	17	18	
9	9	10	11	12	13	14	15	16	17	18	19	
10	10	11	12	13	14	15	16	17	18	19	20	

1 + 1 = 2So, the double of 1 is 2. Similarly, **Double of 2** = 2 + 2 = 4. **Double of 3** = 3 + 3 = 6. **Double of 4** = 4 + 4 = 8.

In the same way we can find the double of any number.

Observe the double of each number up to 10 from the addition table above. Now, let us see some examples of finding the double of bigger numbers.

a. Double of 13 = 13 + 13 = 26

(since on adding from the ones place, we get 3 + 3 = 6 and 1 + 1 = 2)
b. Double of 20 = 20 + 20 = 40 (since 0 + 0 = 0 and 2 + 2 = 4)
c. Double of 43 = 43 + 43 = 86 (since 3 + 3 = 6 and 4 + 4 = 8)

### Let's Try! 3

Find the double of the following numbers.1. 112. 243. 50



# **Addition by Breaking up Numbers**

Let us learn how we can add numbers quickly by breaking them up into tens and ones.

**Example 10:** Sahil gave 17 biscuits to a hungry stray dog in one week. In the next week, he gave 21 biscuits to the dog. How many biscuits did he give to the dog in two weeks?

*Solution:* To find the number of biscuits Sahil gave to the dog in two weeks we will have to add 17 and 21.

We can break up 17 as 10 + 7 and 21 as 20 + 1. Now let us see how we can add them.

$$17 + 21 = (10) + 7 + (20) + 1$$
$$= 30 + (7) + (1)$$
$$= 30 + 8$$
$$= 38$$

**Step 1:** Add 10 and 20.

**Step 2:** Add 7 and 1.

Step 3: Finally, add the sums obtained.

So, Sahil gave 38 biscuits to the stray dog in two weeks,

Can these numbers be added in another way?

Yes! We can add them by breaking up any one number into tens and ones as well.

$$17 + 21 = 17 + 20 + 1$$
$$= 18 + 20$$
$$= 38$$

### Let's Try! 4

Add by breaking up the numbers into tens and ones.

1.	25 + 34	2.	16 + 42
3.	55 + 35	4.	13 + 66

## Addition by Making Ten

We know that (0, 10), (1, 9), (2, 8), (3, 7), (4, 6), and (5, 5) are the pairs of numbers which add up to 10. We can use these pairs of numbers to add quickly. Let us see how.

**Example 11:** Add: 7 + 8

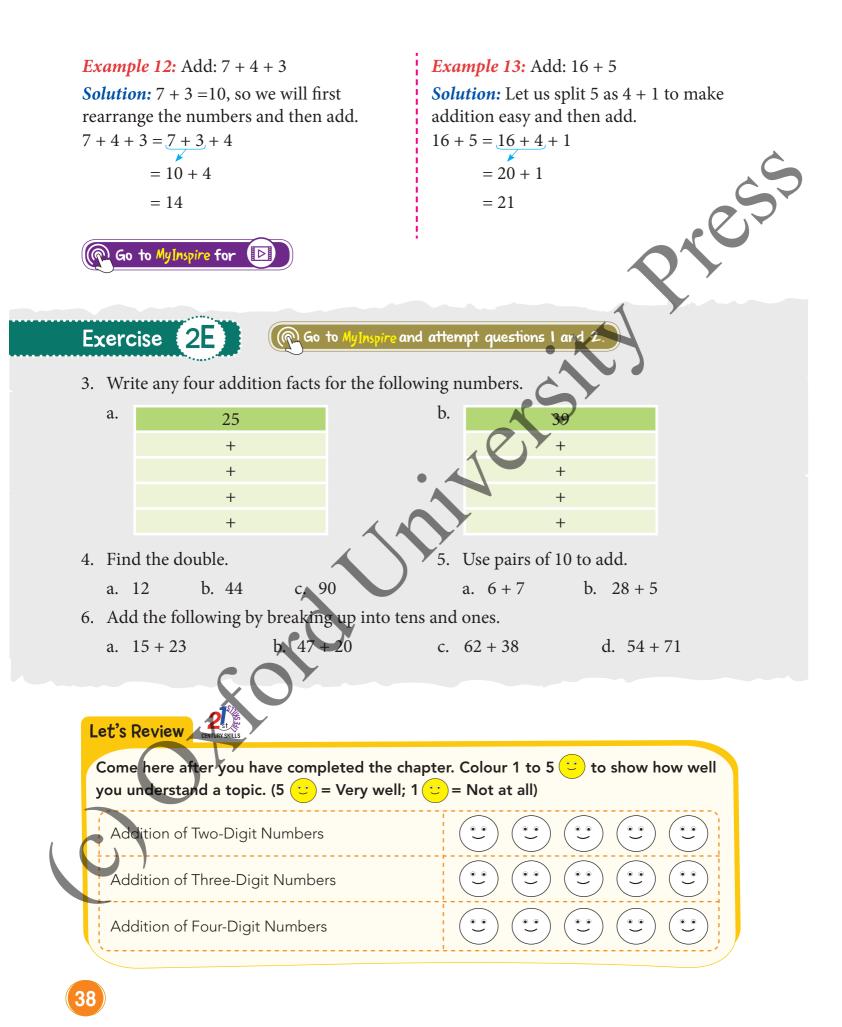
*Solution:* To add these two numbers let us split 8 as 3 + 5, to make a 10.

7 + 8 = 7 + 3 + 5 (Since 7 + 3 = 10, we split = 10 + 5 8 as 3 + 5.) = 15

Try solving the same question by splitting 7 instead of 8. Do you get the same answer?

### Shortcut

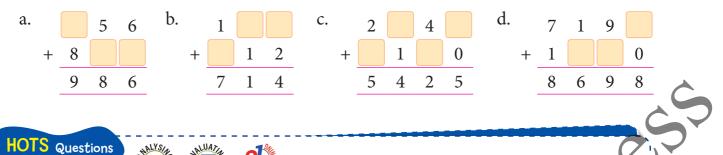
Remember your doubles! 7 + 7 = 148 is one more than 7. So, 7 + 8 = 15. Similarly, 6 is 1 less than 7. So, 7 + 6 = 13.



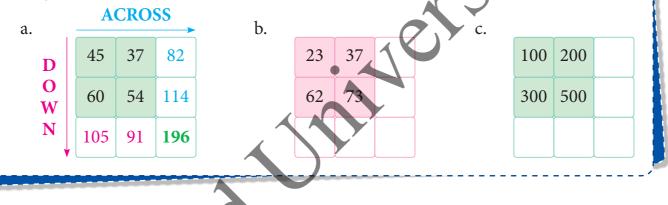
•••••				1		2	>	Re	vis	sio	n	Ex	er	cis	es	(	<u>.</u>						<b></b> •
							<u>م</u> و	io to	MyIn	spire	for					?)	S.W0078	SED , PXON					
St	art	Up	BEA	EMBER	NNG PAR	STAND																Ċ	S
1. Add the following. Regroup if needed.																							
	a.	Т	0				b.	н	Т	0		с.	н	Т	0			d.	Th	H	Т	0	
		2	9					6	0	0			3	0	5			/		6	0	0	
	+	4	3	_			-	+ 2	5	6	_	-	- 4	2	9	_		+		9	9	9	
				_																*			
	e.	Th	Н	Т	0		f.	Th	н	Т	0		g.	н	Т	0		h.	Th	Н	Т	0	
		2	4	2	4			1	2	9	0		U	4	5	6			4	6	0	0	
		4	2	4	2				3	5	9				7	8			2	3	0	0	
	+	1	0	1	0		+	- 5	0	8	1		+	$\overline{\alpha}$	2	3		+	1	5	7	9	
												_	1										
2	C:11	in tl	ho h				44:	tion	proj	anti													
					usii	ig a			proj		les.												
;	a. 4	156 -	+ 50	= 0			+ 4	156	<i>[</i>	Ń		b.	913	3 + 0	) =								
	c.			+ 20	= 0	200	+ ]	10			) ′	d.	0 +			= 6	7						
																J							
Le	vel	Up	RPI	YING	MALYS	EL	ALUA	NG															
1.	A nu	umb	er is	s 1 <b>2</b> 3	mø	ret	han	678	9. Fi	nd t	he	num	ber.										
2. Solve the following word problems.																							
i	a. Joyce, Anis, and Sujan like collecting Pokemon cards. Joyce has 345 Pokemon cards in												n										

- a. Joyce, Anis, and Sujan like collecting Pokemon cards. Joyce has 345 Pokemon cards in her collection. Anis has 129 Pokemon cards in his collection. Sujan has 234 Pokemon cards in his collection. Find the number of Pokemon cards they have in all.
- b. On 2<sup>nd</sup> October every year Gandhi Jayanti is celebrated across India. To mark this day, the people of a society organised a cleaning drive. The drive began with 987 people and later another 259 people joined the drive. How many people participated in the cleaning drive in total?
- c. There were 6723 books in a school library. 2018 more books were purchased and kept in the library. How many books does the library have now?

3. Fill in the missing digits.



- 1. The hilly state of Himachal Pradesh is famous for its apples. Several other fruits are also grown here. A farm near Shimla, the capital of Himachal Pradesh, has plum, pear, and apple trees. There are 2345 plum trees. The number of pear trees are 234 more than the number of plum trees. The number of apple trees are 123 more than the number of pear trees. Find the total number of trees on the farm.
- 2. Add down and across. Then add the sums. What do you find? One has been done for you.



Everyday Maths

We often use addition in our everyday lives, whether it is to find the total money needed to buy items at a grocery store or to find the total runs scored by a cricketer during a match. Think about and discuss some areas in class where you use addition in your daily lives.

- 1. Sam is a musician. He recently posted a video of his new song on Youtube. 674 people watched the video in the first week of its release. Another 562 people watched the video in the record week of its release. How many people watched
- the second week of its release. How many people watched the video in all in two weeks?
- 2. Work with your partner to find the total number of students in Class 3 of your school. First, identify together and find all the information you will need to solve this question.

40