



Properties of Addition ●

Children, to add two or more numbers, certain rules are to be followed. The addition process has some **properties**, which are as follows :

- ❖ The numbers to be added are called **addends** and the answer is called **sum**, such as :
- ❖ The symbol of addition is +. It is also called **positive** symbol.
- ❖ The changing of places of the addends does not change the sum, such as .

T	O	
6	4	← Addend
+ 3	4	← Addend
9	8	← Sum

$$16 + 13 = 29 \quad \text{or} \quad 13 + 16 = 29 \quad \text{i.e.} \quad 16+13 = 13+16$$

- ❖ If 0 is added to any number, the sum remains the same, such as :

$$18 + 0 = 18 \quad 82 + 10 = 92 \quad 70+19 = 89$$

- ❖ Adding 1 to a number gives its successor, such as :

$$48 + 1 = 49 \quad 79 + 1 = 80 \quad 148 + 1 = 149 \quad 278 + 1 = 279$$

- ❖ To add three addends, any two addends can be grouped together and added, such as :

$$26 + 12 + 21$$

$$(26+12) + 21$$

$$38+21 \Rightarrow 59$$

$$26 + 12 + 21$$

$$26 + (12+21)$$

$$26+33 \Rightarrow 59$$

$$26 + 21 + 12$$

$$(26 + 21) + 12$$

$$47 + 12 \Rightarrow 59$$



Exercise 3.1

1. Add the following :

$32+0 = \boxed{}$

$37+0 = \boxed{}$

$42+0 = \boxed{}$

$95+0 = \boxed{}$

$48+1 = \boxed{}$

$73+1 = \boxed{}$

$1+67 = \boxed{}$

$49+1 = \boxed{}$

$0+56 = \boxed{}$

$0+23 = \boxed{}$

$0+38 = \boxed{}$

$0+56 = \boxed{}$

2. Fill in the blanks :

$25 + 40 = \square + 25 = \square$

$10 + 9 + 8 = \square + 9 + 10 = \square$

$87 + \square = 87$

$6 + 40 = \square + 6 = \square$

3. Write the addends and the sums of the given numbers :

	Addend 1	Addend 2	Sum
$45 + 20 = 65$	<input type="text"/>	<input type="text"/>	<input type="text"/>
$76 + 11 = 87$	<input type="text"/>	<input type="text"/>	<input type="text"/>

	Addend 1	Addend 2	Sum
$84 + 11 = 95$	<input type="text"/>	<input type="text"/>	<input type="text"/>
$63 + 34 = 97$	<input type="text"/>	<input type="text"/>	<input type="text"/>

Addition of Two-Digit Numbers in Expanded Form ●

First of all, write the given 2-digit numbers in expanded form. Then, the tens and the ones of the numbers are added separately. Then, the numbers are written in short form.

Example : Add 43 and 24 in expanded form :

Solution :

$$\begin{array}{r}
 43 = 4 \text{ tens} + 3 \text{ ones} \\
 + 24 = 2 \text{ tens} + 4 \text{ ones} \\
 \hline
 67 = 6 \text{ tens} + 7 \text{ ones} \\
 \text{Hence, } 43 + 24 = 67
 \end{array}$$

Short form

T	O
4	3
+ 2	4
6	7



Exercise 3.2

1. Add the following in expanded form :

$42 = \square \text{ tens} + \square \text{ ones}$
$+ 32 = \square \text{ tens} + \square \text{ ones}$
$\square = \square \text{ tens} + \square \text{ ones}$
Hence, $42 + 32 = \square$

$36 = \square \text{ tens} + \square \text{ ones}$
$+ 21 = \square \text{ tens} + \square \text{ ones}$
$\square = \square \text{ tens} + \square \text{ ones}$
Hence, $36 + 21 = \square$

$14 = \square \text{ tens} + \square \text{ ones}$
$+ 33 = \square \text{ tens} + \square \text{ ones}$
$\square = \square \text{ tens} + \square \text{ ones}$
Hence, $14 + 33 = \square$

$53 = \square \text{ tens} + \square \text{ ones}$
$+ 46 = \square \text{ tens} + \square \text{ ones}$
$\square = \square \text{ tens} + \square \text{ ones}$
Hence, $53 + 46 = \square$

Addition of Two-Digit Numbers Without Carrying ●

Example: Add 24 and 22.

Solution:

Step 1	Step 2	Step 3																												
<table style="border: 1px solid black; padding: 5px;"> <tr><td>T</td><td>O</td></tr> <tr><td>2</td><td>4</td></tr> <tr><td>+ 2</td><td>2</td></tr> <tr><td colspan="2" style="border: 1px solid black; height: 15px;"></td></tr> </table>	T	O	2	4	+ 2	2			<table style="border: 1px solid black; padding: 5px;"> <tr><td>T</td><td>O</td></tr> <tr><td>2</td><td>4</td></tr> <tr><td>+ 2</td><td>2</td></tr> <tr><td colspan="2" style="border: 1px solid black; height: 15px;"></td></tr> <tr><td></td><td>6</td></tr> </table>	T	O	2	4	+ 2	2				6	<table style="border: 1px solid black; padding: 5px;"> <tr><td>T</td><td>O</td></tr> <tr><td>2</td><td>4</td></tr> <tr><td>+ 2</td><td>2</td></tr> <tr><td colspan="2" style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>4</td><td>6</td></tr> </table>	T	O	2	4	+ 2	2			4	6
T	O																													
2	4																													
+ 2	2																													
T	O																													
2	4																													
+ 2	2																													
	6																													
T	O																													
2	4																													
+ 2	2																													
4	6																													

Hence, $24 + 22 = 46$ **Answer**

Method ■

1. First of all, write the numbers in columns.
2. Add the ones:
 $4 + 2 = 6$
3. Then, add the tens:
 $2 + 2 = 4$



Exercise 3.3

Add the following :

T	O
1	7
+ 3	2

T	O
5	0
+ 4	2

T	O
5	3
+ 4	4

T	O
3	4
+ 5	5

T	O
4	0
+ 2	7

T	O
4	4
+ 2	4

T	O
3	5
+ 3	0

T	O
3	6
+ 2	3

T	O
7	5
+ 2	2

T	O
8	3
+ 1	6

Addition of Three Two-Digit Numbers ●

Example: Add 24, 31 and 43.

Solution: Step 1

T	O
2	4
3	1
+ 4	3

Step 2

T	O
2	4
3	1
+ 4	3
	8

Step 3

T	O
2	4
3	1
+ 4	3
9	8

Hence, $24 + 31 + 43 = 98$ **Answer**

Method ■

1. First of all, write the numbers in columns.
2. Add the ones:
 $4 + 1 + 3 = 8$
3. Then, add the tens:
 $2 + 3 + 4 = 9$



Exercise 3.4

Add the following :

T	O
4	6
1	1
+ 3	2
<input type="text"/>	

T	O
2	2
5	4
+ 2	3
<input type="text"/>	

T	O
1	2
2	5
+ 6	2
<input type="text"/>	

T	O
2	6
5	1
+ 2	2
<input type="text"/>	

T	O
4	4
2	1
+ 3	4
<input type="text"/>	

T	O
5	3
2	3
+ 1	3
<input type="text"/>	

T	O
4	5
2	3
+ 2	0
<input type="text"/>	

T	O
3	4
3	4
+ 1	0
<input type="text"/>	

T	O
2	5
3	3
+ 3	0
<input type="text"/>	

T	O
7	1
1	3
+ 1	5
<input type="text"/>	

Addition of Three-Digit Numbers Without Carrying

Example : Add 317 and 522.

Solution :

H	T	O
3	1	7
+ 5	2	2
<input type="text"/>		



H	T	O
3	1	7
+ 5	2	2
<input type="text"/>		
		9



H	T	O
3	1	7
+ 5	2	2
<input type="text"/>		
	3	9



H	T	O
3	1	7
+ 5	2	2
<input type="text"/>	3	9
8	3	9

Method

- ▶ First of all, write the numbers in columns.
- ▶ Now, add the ones : $7 + 2 = 9$
- ▶ Then, add the tens : $1 + 2 = 3$
- ▶ In the end, add the hundreds : $3 + 5 = 8$
- ▶ So, $317 + 522 = 839$ **Answer**



Exercise 3.5

Add the following :

H	T	O
2	2	3
+ 2	5	4
<input type="text"/>		

H	T	O
3	7	4
+ 5	1	3
<input type="text"/>		

H	T	O
4	3	9
+ 1	5	0
<input type="text"/>		

H	T	O
7	3	3
+ 2	2	4
<input type="text"/>		

H	T	O
5	2	7
+ 1	7	2
<input type="text"/>		

H	T	O
6	2	1
+3	7	8

H	T	O
4	2	2
+2	5	7

H	T	O
1	2	3
+3	2	0

H	T	O
5	5	0
+4	3	2

H	T	O
7	0	0
+1	2	5

H	T	O
1	1	5
1	6	2
+4	2	2

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

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

H	T	O
1	4	2
5	3	6
+1	2	1

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

Addition of Three-Digit Numbers in Expanded Form ●

Example: Add 245 and 423 in expanded form :

Solution :

$$\begin{aligned}
 245 &= 2 \text{ hundreds} + 4 \text{ tens} + 5 \text{ ones} \\
 +423 &= 4 \text{ hundreds} + 2 \text{ tens} + 3 \text{ ones} \\
 \hline
 668 &= 6 \text{ hundreds} + 6 \text{ tens} + 8 \text{ ones} \\
 \text{Hence, } 245 + 423 &= 668
 \end{aligned}$$



Short form

H	T	O
2	4	5
+4	2	3
6	6	8



Exercise 3.6

Add the following in expanded form :

1. 372 and 124 :

372	=		hundreds +		tens +		ones
+ 124	=		hundreds +		tens +		ones
	=		hundreds +		tens +		ones
Hence , 372 + 124 =							



Teacher's Corner

Let the students practise some more such questions.

2. 626 and 323 :

626	=	□	hundreds +	□	tens +	□	ones
+ 233	=	□	hundreds +	□	tens +	□	ones
□	=	□	hundreds +	□	tens +	□	ones
Hence, 626 + 233 = □							

3. 282 and 502 :

282	=	□	hundreds +	□	tens +	□	ones
+ 502	=	□	hundreds +	□	tens +	□	ones
□	=	□	hundreds +	□	tens +	□	ones
Hence, 282 + 502 = □							

4. 154 and 635

154	=	□	hundreds +	□	tens +	□	ones
+ 635	=	□	hundreds +	□	tens +	□	ones
□	=	□	hundreds +	□	tens +	□	ones
Hence, 154 + 635 = □							

Addition of Two-Digit Numbers With Carrying ●

Example : Add 36 and 48.

Solution :

T	O			
3	6	→	3	6
+ 4	8		+ 4	8
□	□		1	4

T	O			
3	6	→	3	6
+ 4	8		+ 4	8
□	□		8	4

Hence, $36 + 48 = 84$ **Answer**

Method ■

- ▶ First of all, write the numbers in columns.
- ▶ Now, add the ones :
 $6 + 8 = 14$ ones
 14 ones = 1 tens + 4 ones
- ▶ Now, put 4 ones below the ones column and carry the 1 in the circle above the tens column.
- ▶ Now, add the tens
 $1 + 3 + 4 = 8$
- ▶ Now, write 8 under the tens column.



Let us Know

You can add three two digit numbers in the same manner and get the sum.



Exercise 3.7

Add the following :

T	O
●	
4	8
+ 3	6
□	

T	O
●	
5	7
+ 3	6
□	

T	O
●	
4	5
+ 3	9
□	

T	O
●	
3	2
+ 4	9
□	

T	O
●	
4	8
+ 3	7
□	



Teacher's Corner

Let the students practise some more such questions.

T	O
●	
6	8
+ 2	9
□	

T	O
●	
7	8
+ 1	9
□	

T	O
●	
4	7
+ 4	9
□	

T	O
●	
2	4
+ 3	8
□	

T	O
●	
3	7
+ 5	9
□	

T	O
●	
7	4
+ 1	6
□	

T	O
●	
2	3
5	8
+ 1	1
□	

T	O
●	
4	3
1	8
+ 2	1
□	

T	O
●	
3	2
1	8
+ 3	0
□	

T	O
●	
1	7
6	5
+ 8	
□	

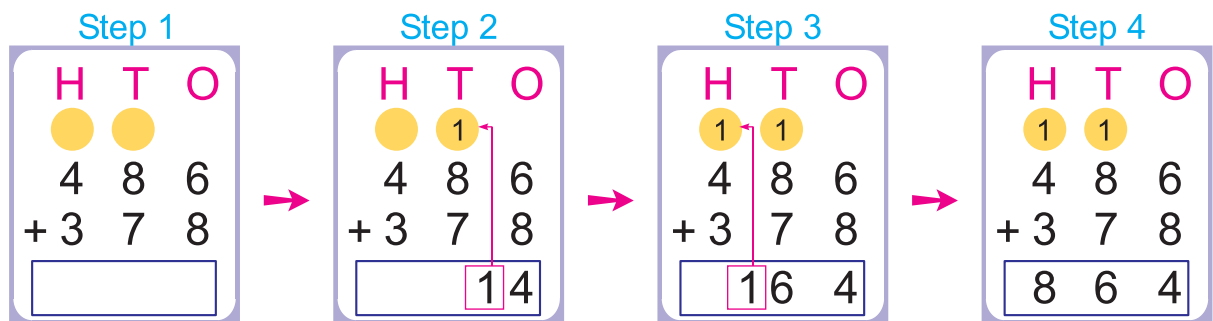
T	O
●	
6	8
1	7
+ 7	
□	

T	O
●	
5	4
1	8
+ 1	9
□	

Addition of Three-Digit Numbers With Carrying ●

Example : Add 486 and 378.

Solution :



Method ■

1. First of all, write the numbers in columns.
2. Now, add the ones ; $6 + 8 = 14$ ones = 1 tens + 4 ones. Now, write 4 under the ones column and 1 above in the tens columns.
3. Now, add the tens : $1 + 8 + 7 = 16$ tens = 1 hundreds + 6 tens. Write, 6 under the tens column and 1 above in the hundreds column.
4. Now, add the hundreds : $1 + 4 + 3 = 8$. Write 8 under the hundreds columns.



Exercise 3.8

1. Find the total :

H	T	O	
4	3	6	
+	3	6	5

H	T	O	
6	5	7	
+	1	4	5

H	T	O	
5	5	9	
+	3	6	8

H	T	O	
4	3	9	
+	4	6	1



Let us Know

Children, you can add three three-digit numbers in the same way and find the sum.

H	T	O	
3	3	7	
2	6	0	
+	1	8	8

H	T	O	
6	9	4	
1	3	5	
+	1	4	6

H	T	O	
4	2	6	
3	2	3	
+	1	7	5

H	T	O	
5	3	8	
1	8	2	
+	2	6	3

H	T	O	
4	5	6	
1	4	7	
+	2	9	8

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

H	T	O	
7	2	6	
1	6	4	
+	1	5	3

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

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

H	T	O	
5	6	4	
1	6	2	
+	3	7	5

2. Write in columns and add :

$546 + 265 = \square$

$115 + 249 = \square$

$274 + 158 = \square$

$262 + 119 = \square$

$296 + 338 = \square$

$296 + 679 = \square$

$585 + 475 = \square$

$296 + 189 = \square$

$356 + 197 = \square$

3. Write in figures and add :

(a) Three hundred twenty five and three hundred eighty nine =

(b) Four hundred seventy eight and two hundred eighty one =

(c) Seven hundred fifty five and one hundred seventy nine =

(d) Five hundred twenty five and three hundred nine =

(e) One hundred sixty three and two hundred forty eight =

Word Problems Based on Addition ●



Exercise 3.9

1. Anushka had 59 tickets. Her father gave her 15 tickets more. How many tickets does Anushka have now?

2. Vansh's father bought a box containing 152 toffees and his mother bought a box containing 245 toffees. How many toffees are there in both the boxes ?

3. There are 205 mango trees, 130 pear trees and 150 apple trees in an orchard. Find the total number of trees in the orchard.

4. Class I has 290 students and class II has 328 students. What is the total number of students in both the classes?

5. A farmer has 444 cows. Another farmer has 378 cows. What is the total number of cows with both the farmers?

6. Rahul's maths book has 561 pages and Hindi book has 394 pages. How many pages in all are there in both the books ?

7. There are 315 trees of mango, 480 trees of guava and 116 trees of peach in an orchard. What is the total number of trees in the orchard?

8. Tick (✓) against the correct option :

Multiple Choice Questions

(a) What will be the sum of 440 and 155 ? (i) 685 (ii) 575 (iii) 595

(b) What will be the sum of $96 + 126 + 245$? (i) 467 (ii) 567 (iii) 764

(c) What will be the sum of $376 + 385$? (i) 661 (ii) 761 (iii) 671