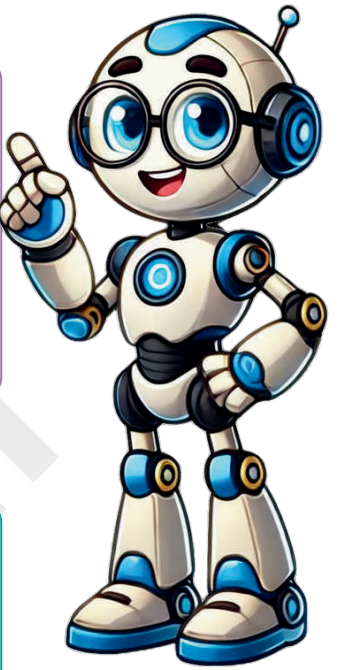
4 Subtraction of Numbers

We'll cover the following key points:

→Subtraction
→Subtraction of 4-digit Numbers (Without Borrowing)
→Subtraction of 4-digit Numbers (With Borrowing)
→Problems on Subtraction Problem Solving
→Addition and Subtraction



Hi, I'm EeeBee

Do you Remember fundamental concept in previous class.
In class 2nd we learnt

→Subtraction Without Borrowing
→Subtraction with Borrowing
→Word Problem Based on Subtraction
→Addition and Subtraction as Inverse Process

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

Learning Outcomes

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

- Understand the concept of subtraction as the process of taking away or finding the difference.
- Solve subtraction problems involving two- and three-digit numbers with and without regrouping.
- Recognize and use subtraction symbols and terms such as "minus," "difference," and "take away."
- Verify subtraction results using addition (inverse operation).
- Solve word problems involving subtraction in real-life scenarios.
- Perform mental subtraction for simple numbers up to 100.
- Develop strategies to estimate the difference in subtraction problems.
- Identify and solve subtraction problems involving zero as a minuend or subtrahend.

Help Tweety the bird, to find its nest by subtraction correctly.

	6	4
–	3	2

→

	8	6
–	6	4

→

	9	7
–	4	4

↓

	8	6
–	3	5

↓

	6	3
–	4	3

↓

	9	5
–	5	5

←

	6	8
–	2	5

←

	6	8
–	3	2

←

	6	7
–	1	3

↑

	5	7
–	3	5

↑

	7	8
–	3	2

→

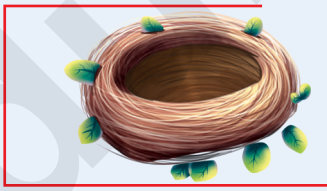
	5	9
–	1	6

→

	5	8
–	3	8

→

	8	2
–	3	1



Subtraction

Subtraction means taking away. When we subtract a smaller number from a bigger number, the answer we get is called the **difference**.

Terms of Subtraction

Subtrahend: The number which is to be subtracted is known subtrahend.

Minuend: The number from which the subtrahend is subtracted is known as minuend.

Difference: When the subtrahend is subtracted from the minuend, the result is known as difference.

For example:

	H	T	O	
	5	6	8	← minuend
–	3	1	5	← subtrahend
	2	5	3	← difference.

In Class II, we have learnt the subtraction of 2-digit or 3-digit numbers without and with borrowing. Let us revise it through some examples:

Example 1 : Subtract 323 from 875.

Solution :

	H	T	O
	8	7	5
–	3	2	3
	5	5	2

Hence, 875 – 323 = 552

Steps

1. Subtraction of ones: 5 – 3 = 2 ones.
2. Subtraction of tens: 7 – 2 = 5 tens.
3. Subtraction of hundreds: 8 – 3 = 5 hundreds.

Example 2 : Subtract 395 from 624.

Solution :

	H	T	O
	5	11	14
	~~6~~	~~2~~	~~4~~
–	3	9	5
	2	2	9

Steps

1. 4 ones is less than 5 ones. So, we can't subtract 5 from 4.
2. Borrow 1 ten from 2 tens. Then, we get 1 ten + 4 ones = 10 ones + 4 ones = 14 ones Now, 14 ones – 5 ones = 9 ones. Write 9 at the ones place.
3. Now from the tens place, we have taken 1 ten from 2 tens. But, 1 ten is less than 9 tens. So, we can't subtract 9 tens from 1 ten.

4. Borrow 1 hundred from the hundreds place. Then, we get 1 hundred + 1 ten = 10 ten + 1 tens = 11 tens. Now, 11 tens – 9 tens = 2 tens. Write 2 at tens place.
5. Since we have taken 1 hundred from 6 hundreds, only 5 hundreds remain.
   Then, we get 5 hundreds – 3 hundreds = 2 hundreds.
   Write 2 at the hundreds column.

Hence, 624 – 395 = **229**.

Exercise 4.1

Knowledge Application

1. Subtract the following :

(a)
	H	T	O
	6	5	9
–	2	3	4

(b)
	H	T	O
	9	3	5
–	6	7	6

(c)
	H	T	O
	8	7	6
–	2	5	7

(d)
	H	T	O
	6	6	7
–	3	2	8

(e)
	H	T	O
	8	8	7
–	2	8	9

(f)
	H	T	O
	6	4	5
–		9	9

(g)
	H	T	O
	3	1	9
–	2	9	9

(h)
	H	T	O
	5	7	2
–	1	9	9

(i)
	H	T	O
	7	5	9
–	5	1	9

(j)
	H	T	O
	8	1	2
–	3	8	9

(k)
	H	T	O
	6	7	5
–	1	4	9

(l)
	H	T	O
	5	7	4
–	3	8	7

2. Match the columns:

	Column A		Column B
(a)	945 – 319	(i)	201
(b)	888 – 435	(ii)	267
(c)	382 – 115	(iii)	453
(d)	578 – 349	(iv)	229
(e)	500 – 299	(v)	626

3. Subtract the following:

(a) 498 from 920
(b) 599 from 800
(c) 546 from 819
(d) 0 from 619

Subtraction of 4-digit Numbers (Without Borrowing)

The subtraction of 4-digit numbers is the same as that of 3-digit numbers.

Working Rules:-

Step 1 : Write the smaller number under the larger number in columns.

Step 2 : Subtract column- wise.

Subtract ones from ones, tens from tens, hundreds from hundreds and thousands from thousands.

Example 3 : Subtract 6154 from 9287.

Solution :

	Th	H	T	O
	9	2	8	7
–	6	1	5	4
	3	1	3	3

→ Subtracting ones : 7 – 4 = 3 ones

→ Subtracting tens : 8 – 5 = 3 tens

→ Subtracting hundreds : 2 – 1 = 1 hundred

→ Subtracting thousands : 9 – 6 = 3 thousands

Hence, 9287 – 6154 = 3133.

Example 4 : Subtract 3252 from 9667.

Solution :

	Th	H	T	O
	9	6	6	7
–	3	2	5	2
	6	4	1	5

→ Subtracting ones : 7 – 2 = 5 ones

→ Subtracting tens : 6 – 5 = 1 ten

→ Subtracting hundreds : 6 – 2 = 4 hundreds

→ Subtracting thousands : 9 – 3 = 6 thousands

Hence, 9667 – 3252 = **6415**.

Checking Answer

For checking the answer, we add the answer to the smaller number. If the obtained sum is equal to the greater number, we say that the answer is correct. Now, check your answer in the above Example 4.

$$\begin{array}{rrrr} & 9 & 6 & 6 & 7 \\ - & 3 & 2 & 5 & 2 \\ \hline & 6 & 4 & 1 & 5 \end{array} \quad \text{is equal to} \quad \begin{array}{rrrr} & 6 & 4 & 1 & 5 \\ + & 3 & 2 & 5 & 2 \\ \hline & 9 & 6 & 6 & 7 \end{array}$$

It shows that answer to the question in Example 4 is correct.

Exercise 4.2

Knowledge Application

1. Subtract the following:

(a)

	Th	H	T	O
	8	7	8	3
–	5	4	3	1

(b)

	Th	H	T	O
	7	6	5	9
–	4	3	2	4

(c)

	Th	H	T	O
	5	8	8	9
–	1	7	3	2

(d)

	Th	H	T	O
	8	8	7	8
–	4	3	2	6

(e)

	Th	H	T	O
	6	5	4	3
–	3	4	2	1

(f)

	Th	H	T	O
	9	4	6	9
–	3	3	5	0

2. Find the difference and check your answer :

(a) 4533 from 9998 (b) 3428 from 6689 (c) 4476 from 5897

3. Match the columns:

	Column A		Column B
(a)	4532 – 2211	(i)	4411
(b)	6793 – 5262	(ii)	4425
(c)	9978 – 4432	(iii)	1531
(d)	8835 – 4424	(iv)	5546
(e)	6759 – 2334	(v)	2321

Subtraction of 4-digit Numbers (With Borrowing)

Example 5 : Subtract 3794 from 6283.

Solution :

Step 1 : We write the numbers in columns as shown.

Step 2 : Subtracting ones:

Since 3 is less than 4, we can't subtract.

So, we borrow 1 ten from 8 tens.

Now, 1 ten + 3 ones = 10 + 3 = 13 ones

Also, 13 ones – 4 ones = 9 ones

Write 9 at the ones column.

Step 3: After borrowing 1 ten, there are 7 tens in the tens column.

We can't subtract 9 tens from 7 tens.

We borrow 1 hundred from the hundreds column.

Now 1 hundred + 7 tens = 10 + 7 = 17 tens

Also, 17 tens – 9 tens = 8 tens

Write 8 at the tens column.

Step 4: Since, we have taken 1 hundred from 2 hundreds, only 1 hundred remains.

But, 7 hundreds can't be subtracted from 1 hundred.

So we borrow 1 thousand from the thousands column.

1 thousand + 1 hundred = 10 + 1=11 hundreds.

Now, 11 – 7 = 4 hundreds.

Write 4 at the hundreds column.

Step 5: Since, we have taken 1 thousand from 6 thousands, 5 thousands remain in the thousands column

Subtracting, we get 5 – 3 = 2 thousands.

Write 2 at the thousands column.

Hence, 6283 – 33794 = 2489.

	Th	H	T	O
	6	2	8	3
–	3	7	9	4

	Th	H	T	O
			7	13
	6	2	8	~~3~~
–	3	7	9	4
				9

	Th	H	T	O
		1	17	13
	6	2	~~8~~	~~3~~
–	3	7	9	4
			8	9

	Th	H	T	O
		11	17	13
	6	~~2~~	~~8~~	~~3~~
–	3	7	9	4
		4	8	9

	Th	H	T	O
	5	11	17	13
	~~6~~	~~2~~	~~8~~	~~3~~
–	3	7	9	4
	2	4	8	9

Example 6 : Find the difference between 8532 and 4867 and check your answer.

Solution :

Th	H	T	O
7	14	12	12
~~8~~	~~5~~	~~3~~	~~2~~
4	8	6	7
3	6	6	5

We took the following steps for this subtraction :

Step 1: Arrange the numbers column- wise and start subtracting one by one.
Since 2 <7, borrow 1 ten from the tens column.
Now, 1 ten + 2 ones = 10 ones + 2 ones = 12 ones
Then, 12 ones – 7 ones = 5 ones.

Step 2: Subtracting tens column.
Since 2 < 6, we can't subtract 6 from 2.
So, we borrow 1 hundred from the hundreds column.
Now, 1 hundred + 2 tens = 10 tens + 2 tens = 12 tens
Then, 12 tens - 6 tens = 6 tens.

Step 3: Subtracting hundreds column.
Since 4 < 8, we can't subtract 8 from 4.
So, we borrow 1 thousand from the thousands column.
Now, 1 thousand + 4 hundreds = 10 hundreds + 4 hundreds
= 14 hundreds
Then, 14 hundreds – 8 hundreds = 6 hundreds

Step 4: Subtracting thousands column.
Since 1 thousand is borrowed from 8 thousands, there remains 7 thousands.
Now, 7 thousands – 4 thousands = 3 thousands
Hence, 8532 – 4867 = **3665**.

Checking Answer

	3	6	6	5	→ Answer
+	4	8	9	7	→ Smaller number
	8	5	3	2	→ Greater number

Thus, the answer is **correct**.

Exercise 4.3

Knowledge Application

1. Subtract the following:

(a)

	Th	H	T	O
	6	2	3	5
–	4	9	9	8

(b)

	Th	H	T	O
	2	8	9	9
–	1	9	9	7

(c)

	Th	H	T	O
	6	7	5	8
–	2	8	9	9

(d)

	Th	H	T	O
	6	2	5	9
–	5	2	8	9

(e)

	Th	H	T	O
	6	5	2	7
–	4	6	9	8

(f)

	Th	H	T	O
	6	3	3	2
–	4	5	6	8

(g)

	Th	H	T	O
	9	2	2	0
–	5	8	8	3

(h)

	Th	H	T	O
	6	2	8	2
–	2	1	3	9

(i)

	Th	H	T	O
	5	0	0	5
–	2	8	8	7

2. Subtract the following:

(a) 4256 from 6023
(b) 2888 from 7000
(c) 1999 from 3080
(d) 2358 from 9238

Take a Task

Watch Remedial

Problems on Subtraction Problem Solving

Example 7 : What should be added to 1899 to get 3728?

Solution : We have to subtract 1899 from 3728

	Th	H	T	O
	~~3~~ (2)	~~7~~ (16)	~~2~~ (11)	~~8~~ (18)
–	1	8	9	9
	1	8	2	9

Hence, 1829 should be added to 1899 to get 3728.

Example 8 : Find the difference between the largest and the smallest 4 - digit numbers formed using the digits 8, 3, 7 and 2. Each digit should be used once only.

Solution :

The digits are 8, 3, 7 and 2
The largest 4- digit number formed = 8732
The smallest 4- digit number formed = 2378
Their difference = 8732 – 2378 = **6354**.

		6	12	12
	8	7	3	2
–	2	3	7	8
	6	3	5	4

Exercise 4.4

Knowledge Application

1. Multiple Choice Questions (MCQs)

Choose the correct option.

(a) What should be added to 435 to get 1000?

(i) 650 ☐ (ii) 565 ☐ (iii) 655 ☐ (iv) 750 ☐

(b) The sum of two numbers is 2894. If one of them is 1750, the other number is

(i) 1520 ☐ (ii) 1441 ☐ (iii) 1414 ☐ (iv) 1144 ☐

(c) There are 7750 eggs in a shop. Out of them, 3478 eggs are sold. How many eggs are left now ?

(i) 4722 ☐ (ii) 2772 ☐ (iii) 4272 ☐ (iv) 4227 ☐

2. There are 7339 books of different languages in a bookshop. If 3588 of them are in English, how many books are there in other languages?

3. Sanjeev's monthly income is ₹ 9000 and his monthly expenditure is ₹ 5923. Find his monthly savings, when savings = income – expenditure.

4. Two persons donated a total sum of ₹ 8000 for flood-relief fund. If one of them donated ₹ 6325, find the donation of other person.

5. Which number is smaller and by how much, 7258 or 7285?

6. From the largest 4-digit number, subtract the :

(a) Largest 3- digit number. (b) Smallest 3-digit number.

7. There are 6400 bags of wheat in a godown. If 2948 bags are sold, how many bags are left in the godown?

Addition and Subtraction

Example 9 : Solve 2428 + 4253 – 2468 + 3063 – 4620.

Solution : Here are some numbers which have '+' sign before them or no sign (i.e. first number). Also, some numbers have '–' sign before them.

Sum of the numbers with '+' sign or no sign before them = 2428 + 4253 + 3063 = 9744.

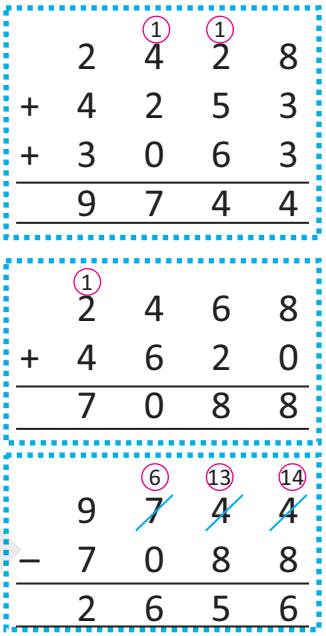
Sum of the numbers with '–' sign before them

= 2468 + 4620 = 7088

Now, subtract the second sum from the first sum

So, 9744 – 7088 = 2656

Hence, 2428 + 4268 + 3063 – 4620 = 2656.



Exercise 4.5

Knowledge Application

1. Solve the following.

(a) 920 – 529 + 115

(b) 5625 + 480 – 2275 – 125

(c) 6580 – 580 + 723 – 2000

(d) 6423 – 2788 – 4325 + 2875

(e) 9000 – 2800 + 2460 – 325

(f) 9328 – 2586 – 1540 + 1740

2. Fill in the boxes:

(a)

	Th	H	T	O
	7	□	9	2
–	1	5	3	□
	□	8	□	8

(b)

	Th	H	T	O
	□	1	□	□
–	4	2	8	5
	1	□	4	9

(c)

	Th	H	T	O
	6	□	□	7
–	□	7	9	□
	4	2	8	5

(d)

	Th	H	T	O
	7	□	□	□
–	4	5	2	7
	3	4	5	9

Think Tank

Gap Analyzer™
Take a Test

1. Tick (✓) the correct answer:

(a) The number which is to be subtracted is known _____.

(i) subtrahend ☐ (ii) minuend ☐ (iii) difference ☐

(b) The number from which the subtrahend is subtracted is known as _____.

(i) subtracted ☐ (ii) minuend ☐ (iii) difference ☐

(c) When the subtrahend is subtracted from the minuend the result is known as _____.

(i) subtracted ☐ (ii) minuend ☐ (iii) difference ☐

(d) Subtract 323 from 875.

(i) 562 ☐ (ii) 552 ☐ (iii) 572 ☐

2. Fill in the blanks:

(a) 8783 – 5431 = _____.

(b) _____ – 6154 = 3133.

(c) 9667 – _____ = 6415.

(d) 6283 – 3794 = _____.

(e) 9235 – 6999 = _____

(f) 8358 – _____ = 4331

(g) 67581 – 3999 = _____

(h) 7345 – _____ = 2339

3. Match the following:

(a) 4956 from 6623

(b) 2890 from 8000

(c) 3682 from 8080

(d) 6328 from 9000

(i) 5110

(ii) 2672

(iii) 1667

(iv) 4398

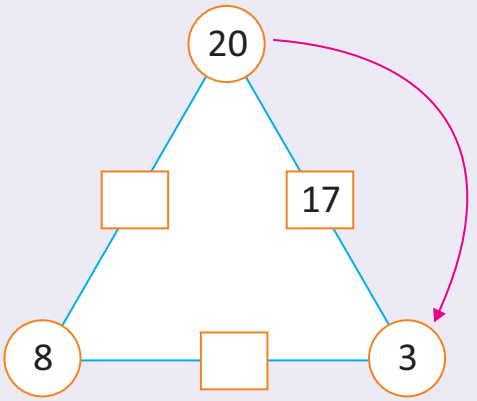
Custom Learning Path

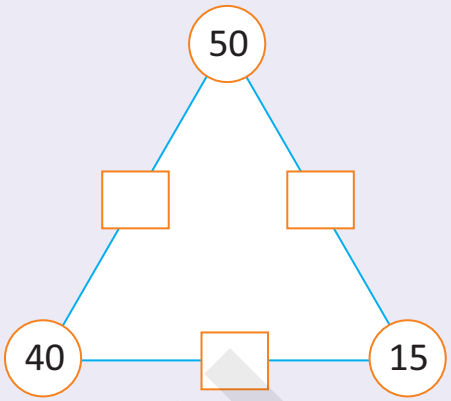
Scan to Create Your Own Learning Path

Puzzle

Conceptual Learning

Complete the following puzzles. One has been done for you:





Mental Math

Critical Thinking

Fill in the boxes:

(a)

	3	□	9	2
–	1	5	3	□
	□	8	□	8

(b)

	4	□	□	2
–	□	8	2	□
		2	3	5	9

Fun Time Activity

Problem Solving

Tick (✓) the correct answer:

2813	5000 – 2287	5000 – 2087	5000 – 2187	5000 – 1977
1797	7080 – 5283	7080 – 5293	7080 – 5493	7080 – 5483
1887	5734 – 3847	5794 – 3847	5743 – 3847	5742 – 3747
4201	8100 – 3799	8200 – 3899	8300 – 4999	8200 – 399
5089	6924 – 1725	6914 – 1825	6942 – 1825	6924 – 2025

Maths Lab Activity

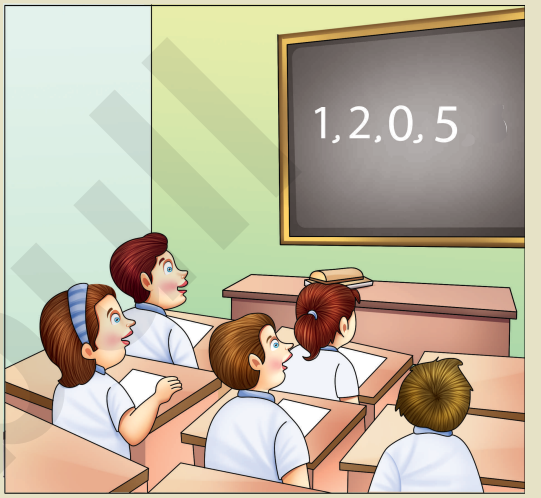
Collaboration

Learning objective: To practice subtraction of 4-digit numbers.

Material required: Notebook and pencil.

Procedure

1. Divide the students in pairs and choose a leader to conduct the activity.
2. The class is ready with the notebooks and pencils.
3. The leader asks the pairs to form any 4-digit number using each digit only once.
4. Next they are asked to form possible subtraction using the 4-digit numbers formed by them.
5. The pair that correctly completes the given task first wins.
6. The activity can be repeated with different combinations of 4-digit numbers.



HOTS

Critical Thinking

What is the largest number of arrows pointing in the same direction?