3 SUBTRACTION

Aman, Mary, Shahid and Meera are reading books.

Mary · Shahid · Meera · Aman
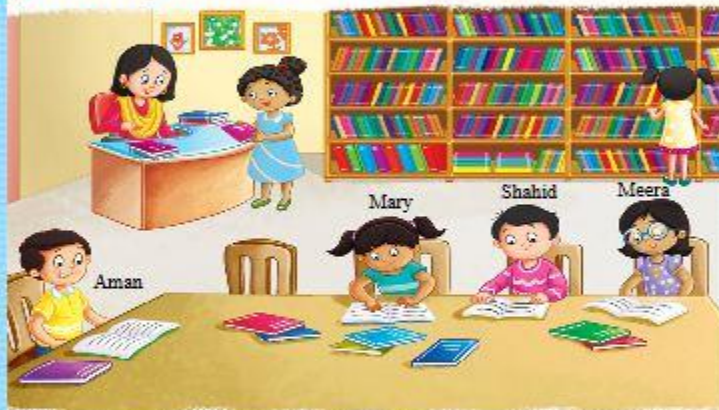
AMAN: My book has 16 pages. I have read 5 pages. How many pages are left?

$$
\begin{array}{r}
1\ 6 \\
-\quad 5 \\
\hline
1\ 1
\end{array}
$$

How many pages are left to read for Mary, Shahid and Meera? **ANS**

MARY
$$
\begin{array}{r}
3\ 6 \\
-\ 2\ 0 \\
\hline
\end{array}
$$

SHAHID
$$
\begin{array}{r}
4\ 8 \\
-\ 3\ 1 \\
\hline
\end{array}
$$

MEERA
$$
\begin{array}{r}
8\ 0 \\
-\ 4\ 0 \\
\hline
\end{array}
$$

41

 can be exchanged for

1 ten   10 ones

 can be exchanged for and

2 tens   1 ten   10 ones

T	O
3	4

= 3 tens 4 ones
= 2 tens + 10 ones + 4 ones
            14 ones

Granny gave me ₹10. Now I can get ten 1 rupee coins for it.

T	O
4	2

= 4 tens 2 ones
= 3 tens + 10 ones + 2 ones
            12 ones

I Can Do It!

Change 1 ten to 10 ones. **ANS**

	T	O							
1.	7	3	7	tens	3	ones	→ 6	tens	13	ones
2.	4	5	4	tens	5	ones	→ 3	tens	15	ones
3.	3	2		tens		ones	→	tens		ones
4.	8	1	___	tens	___	ones	→ ___	tens	___	ones
5.	6	0	___	tens	___	ones	→ ___	tens	___	ones
6.	9	7	___	tens	___	ones	→ ___	tens	___	ones

42

Subtracting a 1-digit number from a 2-digit number

Russi had 24 crayons. He gave 5 crayons to his friend.
How many crayons are left with Russi?
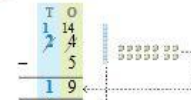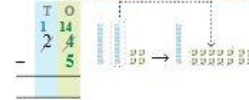To get how many crayons are left, find 24 – 5.

STEP 1 There are not enough ones.
Regroup 1 ten into 10 ones.
So, 2 tens 4 ones = 1 ten 14 ones

STEP 2 Subtract the ones.
Subtract the tens.

Russi has 19 crayons left with him.

Subtraction facts

When you subtract 0 from a number, the difference is the number itself.	When you subtract a number from itself, the difference is 0.	When you subtract 1 from a number, the difference is the number before.
7 – 0 = 7	15 – 15 = 0	17 – 1 = 16
16 – 0 = 16	13 – 13 = 0	14 – 1 = 13

I Can Do It!

Regroup and subtract. Type the correct number in the ⬤ . **ANS**

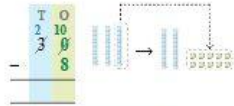| 1.	2.	3.	4.
1 14			
2 4	4 6	3 5	7 7
– 7	– 9	– 6	– 8
_____	_____	_____	_____

43

Subtracting from numbers ending with 0

A fruit seller had 30 bananas in his stall. A naughty monkey ate 8 bananas. How many bananas are left?
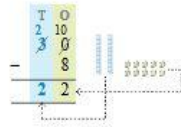
To get the number of bananas left, find 30 − 8.

STEP 1 There are not enough ones. So, regroup 3 tens 0 ones into 2 tens 10 ones.

T	O
2	10
3	0
−	8

STEP 2 Subtract the ones. Subtract the tens.

T	O
2	10
3	0
−	8
2	2

22 bananas are left.

I Can Do It!

Regroup and subtract. **ANS**

1.
```
  2 8
−   9
─────
```

2.
```
  5 0
−   8
─────
```

3.
```
  7 5
−   6
─────
```

4.
```
  3 0
−   1
─────
```

5.
```
  4 6
−   7
─────
```

6.
```
  4 0
−   7
─────
```

7.
```
  6 2
−   8
─────
```

8.
```
  1 3
−   5
─────
```
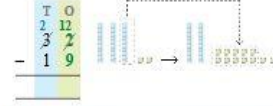
9.
```
  9 7
−   8
─────
```

44

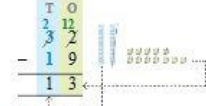## Subtracting a 2-digit number from a 2-digit number

There are 32 plants in Mr Patnaik's garden. He has watered 19 of them. How many more plants does he have to water?

To get the number of plants he has to water, find 32 − 19.

STEP 1 There are not enough ones. So, regroup 3 tens 2 ones into 2 tens 12 ones.

T	O
2	12
3	2
− 1	9

STEP 2 Subtract the ones. Subtract the tens.

T	O
2	12
3	2
− 1	9
1	3

Mr Patnaik has to water 13 more plants.

I Can Do It!

Tick (✓) the sums in which numbers have to be regrouped. Then subtract. **ANS**

1.
```
  2 4
− 1 3  ☐
─────
```

2.
```
  4 2
− 2 8  ☐
─────
```

3.
```
  3 5
− 1 5  ☐
─────
```

4.
```
  4 4
− 2 7  ☐
─────
```

5.
```
  3 8
− 2 1  ☐
─────
```

6.
```
  2 7
− 1 8  ☐
─────
```

Life Skills

Meetu buys an ice cream for ₹ 42. She gives the shopkeeper ₹ 50. The shopkeeper gives her ₹ 10 and asks for change. How much change should she give him? ₹ _____ **ANS**
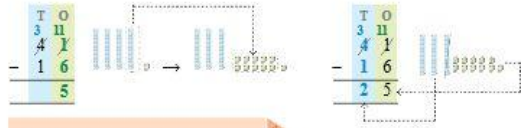
45

Subtracting from numbers ending with 1

Rahul has 41 beads. He uses 16 beads to make a necklace for Granny. How many beads are left with him?

To get the number of beads left, find 41 − 16.

STEP 1 There are not enough ones. So, regroup 4 tens 1 one into 3 tens 11 ones.

STEP 2 Subtract the ones. Subtract the tens.

T	O
3	11
4	1
− 1	6
	5

T	O
3	11
4	1
− 1	6
2	5

Rahul has 25 beads left with him.

Exercise 3.1

A. Subtract. ANS

Remember to regroup if there are not enough ones.

1.	6 7 − 2 5	2.	5 8 − 3 8	3.	3 0 − 1 4	4.	5 3 − 2 7
5.	7 5 − 4 8	6.	6 4 − 2 2	7.	3 7 − 3 0	8.	4 4 − 2 9
9.	6 3 − 2 6	10.	6 5 − 4 9	11.	7 2 − 6 7	12.	9 1 − 8 4

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B. Regroup to subtract. ANS

1.	3 5 − 8	2.	8 1 − 9	3.	7 0 − 6	4.	5 2 − 2 9
5.	2 7 − 1 9	6.	5 1 − 2 9	7.	8 1 − 3 8	8.	9 3 − 2 4
9.	9 1 − 4 7	10.	6 2 − 3 9	11.	4 1 − 3 7	12.	5 2 − 2 3

Get It Right!

4	13
5	3
− 2	3
2	1 0	✗

There are enough ones to subtract from, so do not regroup.

| 5 | 3 |
| − 2 | 3 |
| | 3 0 | ✓

HOTS Questions

Subtract across and down to find the magic number. ANS

1. (−)

7	6	1
5	4	1
2	2	0

(−) ... (−)

2. (−)

8	5	
3	2	

(−) ... (−)

3. (−)

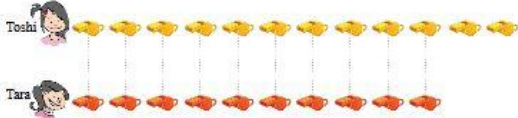| 9	2	
7	1	

(−) ... (−)

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USING SUBTRACTION TO COMPARE

Toshi has 12 whistles. Tara has 10 whistles.
Who has more whistles?
How many more whistles does she have?

STEP 1 Let us match Toshi's whistles with Tara's whistles.

Toshi

Tara

STEP 2 Toshi has more whistles. How many more whistles does Toshi have?
To find out subtract 10 from 12.

	1	2	Toshi's whistles
−	1	0	Tara's whistles
		2	more whistles

> Use subtraction to find out how many more or how many less.

Toshi has 2 more whistles than Tara.

Class 2B has planted 92 trees. Class 2C has planted 34 trees.
Who has planted less trees? How many less trees?

STEP 1 34 is less than 92. So, 2C has planted less trees.

STEP 2 To find out how many less trees 2C has planted, subtract 34 from 92.

	8	12	
	9	2	trees planted by 2B
−	3	4	trees planted by 2C
	5	8	less trees planted by 2C

Class 2C has planted 58 less trees.

48

Solve these sums. ANS

1. The entry ticket to a zoo costs ₹15. The entry ticket for a magic show costs ₹82. Which costs less – a ticket to the zoo or a ticket to the magic show? How much less does it cost?

	cost of a ticket to the magic show
−	cost of a ticket to the zoo

   A ticket to the _____ costs ₹_____ less.

2. Sid baked 12 cookies on Sunday and 14 cookies on Monday. How many more cookies did he bake on Monday?

	_____
−	_____

   Sid baked _____ more cookies on Monday.

3. Uncle Ravi's shop has 36 red T-shirts and 29 purple T-shirts. Which colour T-shirts are more – red or purple? How many more?

	_____
−	_____

   T-shirts are _____ more than _____ T-shirts.

4. There are 30 lilies. 24 lilies are white. How many lilies are not white?

	_____
−	_____

   _____ lilies are not white.

49

5. 66 babies were brought for polio drops to a hospital. 29 babies have been given the drops. How many babies are yet to get the drops? ANS

```
  _____
−
  _____
```

_____ babies are yet to get the polio drops.

Paul and Alan had 30 toys each. Paul gave some of his toys to Alan, and Alan now has 40 toys. How many more toys does Alan have than Paul? ANS

CHECKING SUBTRACTION WITH ADDITION

Rajiv has 49 colour pencils. He took out 24 colour pencils. How many colour pencils are left?

```
   4 9
−  2 4
-------
   2 5
```

25 colour pencils are left.

BIGGER NUMBER
− SMALLER NUMBER
DIFFERENCE ....

Is my answer correct?

DIFFERENCE
+ SMALLER NUMBER
BIGGER NUMBER

To check the answer, add the difference to the smaller number.

```
   2 5
+  2 4
-------
   4 9
```

Rajiv has again got 49 colour pencils. So, his answer is correct.

1. If you see words such as **in all**, **altogether** and **total** in a sum, you should add the numbers.

2. If you see words such as **left**, **more**, **less** and **difference** in a sum, you should subtract the numbers.

Exercise 3.3

A. Subtract and check the answer by addition. ANS

1.
```
   3 8          CHECK
−  1 1    ->+   2 7
-------         1 1
   2 7         -----
                3 8
```

2.
```
   3 9          CHECK
−  1 9    ->+
-------
```

3.
```
   4 6          CHECK
−  2 0    ->+
-------
```

4.
```
   5 8          CHECK
−  3 9    ->+
-------
```

5.
```
   7 5          CHECK
−  3 8    ->+
-------
```

6.
```
   6 4          CHECK
−  5 6    ->+
-------
```

7.
```
   9 1          CHECK
−  6 6    ->+
-------
```

8.
```
   9 0          CHECK
−  5 0    ->+
-------
```

1. $12 - 7 = \underline{5}$ 2. $24 - 8 = \underline{16}$ 3. $51 - 9 = \underline{42}$
   $22 - 7 = \underline{\hspace{1cm}}$ $34 - 8 = \underline{\hspace{1cm}}$ $61 - 9 = \underline{\hspace{1cm}}$
   $32 - 7 = \underline{\hspace{1cm}}$ $44 - 8 = \underline{\hspace{1cm}}$ $71 - 9 = \underline{\hspace{1cm}}$
   $42 - 7 = \underline{\hspace{1cm}}$ $54 - 8 = \underline{\hspace{1cm}}$ $81 - 9 = \underline{\hspace{1cm}}$
   $52 - 7 = \underline{\hspace{1cm}}$ $64 - 8 = \underline{\hspace{1cm}}$ $91 - 9 = \underline{\hspace{1cm}}$

STORY SUMS

1. There were 52 people in a bus. 21 got off at Qutb Minar. How many were left in the bus?

STEP 1 Read the question.
STEP 2 Underline the important information – from a total of 52 people, 21 people got off.
STEP 3 To find out how many people were left in the bus, subtract.

```
    5  2    total number of people
 -  2  1    people got off
 ─────────
    3  1    people left
```
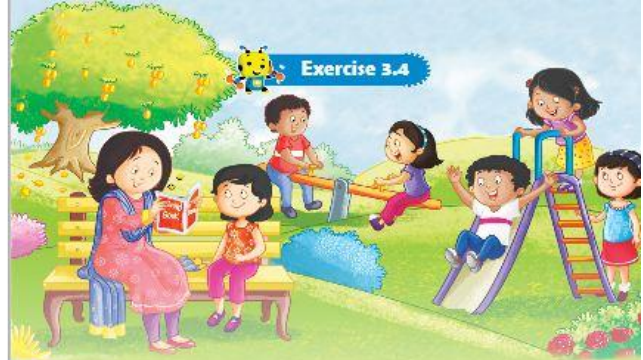
▶ 31 people were left in the bus.

2. Asmi has 15 dinky cars and 13 stuffed toys. How many more dinky cars does she have?

```
    1  5    dinky cars
 -  1  3    stuffed toys
 ─────────
       2
```

▶ Asmi has 2 more dinky cars.

52

Exercise 3.4

🔊 **Solve these sums.** ANS

1. 16 children are there in the park. 11 are girls. How many are boys?

```
    1  6    children
 -  1  1    girls
 ─────────
           boys
```

2. There were 85 mangoes on a tree. 9 mangoes fell off. How many mangoes are left on the tree?

```
           total mangoes
 -         mangoes fell
 ─────────
           mangoes left
```

3. There are 24 rose bushes in the park. 5 bushes have red roses. How many bushes do not have red roses?

```
 -         
 ─────────
```

4. Tanya is 9 years old. Her mother is 40 years old. How many years older is Tanya's mother than Tanya?

```
 -         
 ─────────
```

53

Recall the addition and subtraction facts.

1.	2.	3.	4.
9	7	1 6	1 6
+ 7	+ 9	− 9	− 7
1 6	1 6	7	9

Exercise 3.5

A. Fill in the ◯ to complete these addition and subtraction facts. **ANS**

1.	2.	3.	4.
8	6	◯◯	1 4
+ ◯	+ ◯	− 8	− ◯
1 4	1 4	6	◯

5.	6.	7.	8.
◯	◯◯	◯◯	1
+ ◯	+ ◯	− 7	− ◯
1 3	1 3	6	◯

B. Use the three numbers to type the related addition and subtraction facts. **ANS**

1. ④ ⑧ ⑫
   - a. ◯ + ◯ = ◯
   - b. ◯ + ◯ = ◯
   - c. ◯ − ◯ = ◯
   - d. ◯ − ◯ = ◯

2. ⑤ ⑭ ⑨
   - a. ◯ + ◯ = ◯
   - b. ◯ + ◯ = ◯
   - c. ◯ − ◯ = ◯
   - d. ◯ − ◯ = ◯

Maths Lab Activity

Aim: To play with subtraction

A. Game 1

You will need: Digit cards 0–9

Steps

- Work in pairs. Place the digit cards face down on a table. Their numbers should not be visible.
- Student A turns over two cards and uses the digits to make a 2-digit number, for example, 87.
- Student B does the same to make another 2-digit number, for example, 93.
- Student A subtracts the smaller number from the bigger number.
- Student B checks the answer.
- The students make different 2-digit numbers using the same digit cards. For example, 78 and 39. Student B subtracts the smaller number from the bigger number. Student A checks the answer.

B. Game 2

You will need: Two sets of small circular digit cards 0–9, one bigger and one smaller triangular cards

Steps

- Work in groups of three. Keep the bigger triangular card upside down. Keep the smaller card over the bigger one as shown in the picture.
- Ask your teacher to place digits cards on the three corners of the smaller triangular card.
- Students A, B and C subtract the numbers on each side of the triangle. They place the digit cards with answers on the corners of the bigger triangle.
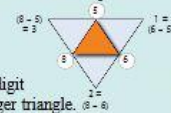
A. Use the number grid to add and subtract. ANS

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

Example 1
Put your finger on 55.
- Which number is 1 less than 55? Move BACK 1 box. It is 54.
- Which number is 4 more than 55? Move FORWARDS 4 boxes. It is 59.
- Which number is 10 less than 55? Move UP 1 box. It is 45.

1. 6 more than 66 ⬤
2. 11 more than 37 ⬤
3. 6 less than 66 ⬤

Example 2 Use the number grid to find 53 − 19.
- Start at 53.
- Move UP 1 box (−10). You reach 43.
- From 43 move BACK 9 boxes (−9). You reach 34. So, 53 − 19 = 34.

Example 3 Use the number grid to find 32 + 18.
- Start at 32.
- Move DOWN 1 box (+10). You reach 42.
- From 42 move FORWARDS 8 boxes (+8). You reach 50. So, 32 + 18 = 50.

B. Use the number grid to add and subtract. ANS

1. 26 + 7 = _____
2. 64 − 23 = _____
3. 64 + 23 = _____
4. 86 − 44 = _____
5. 75 + 18 = _____
6. 56 − 31 = _____

Subtract. Match the answer to the correct number in the box. ANS

1.
$$\begin{array}{r} 6\ 1 \\ -\ 3\ 5 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 3\ 7 \\ -\ 2\ 5 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 9\ 4 \\ -\ 4\ 8 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 6\ 7 \\ -\ 5\ 4 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 7\ 5 \\ -\ 1\ 7 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 5\ 1 \\ -\ 3\ 4 \\ \hline \end{array}$$

17   58   13
46   12   26