6 Addition and Subtraction up to 99

What Learners Will Achieve

- Addition of a 1-digit number and a 2-digit number (without regrouping)
- Addition of 2-digit numbers (without regrouping)
- Subtraction of a 1-digit number from a 2-digit number (without regrouping)
- Subtraction of 2-digit numbers (without regrouping)
- Adding and subtracting tens

Warm-up Addition

What we already know

Addition:

- by forward counting
- by making a group of 10
- on a number line
- of a 2-digit number and a 1-digit number

Falgun got 12 friendship bands on Friendship Day. He got 6 more from his friend. How many bands does he have now?

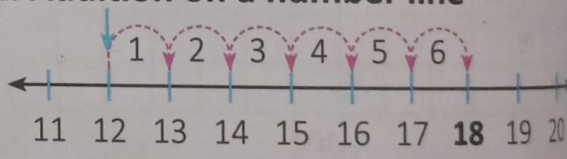
We can find the answer by any one of these methods.

1. Addition by forward counting

12 → 13 → 14 → 15 → 16 → 17 → 18

So, Falgun has 18 friendship bands now.

2. Addition on a number line



So, Falgun has 18 friendship bands now.

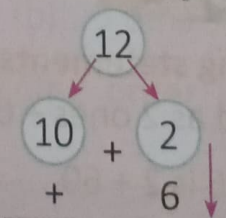
3. Addition by adding ones first

	Tens	Ones
	1	2
+		6
	1	8

Adding the ones first, then tens.

So, Falgun has 18 friendship bands now.

4. Addition by breaking into 10s and



$10 + 8 = 18$

So, Falgun has 18 friendship bands now.

Warm-up Exercise

1. Take one number from Row 1 and another number from Row 2 and find their sum. (Choose at least 5 pairs of numbers for addition).

Row 1	0	1	2	3	4	5	6	7
Row 2	13	10	12	11	8	9		

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

2. Add:

(a)

	Tens	Ones
	1	8
+		1
	1	9

(b)

	Tens	Ones
	1	5
+		2
	1	7

(c)

	Tens	Ones
	1	1
+		8
	1	9

(d)

	Tens	Ones
	1	6
+		1
	1	7

Adding 1-Digit and 2-Digit Numbers up to 99

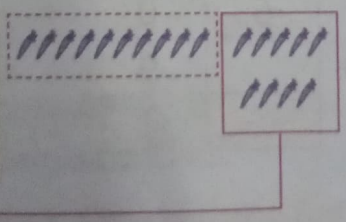
Shelly has 15 hair clips. She got 4 more.

How many hair clips does Shelly have now?

To know the total number of hair clips with Shelly, we add 15 and 4 using the following steps.

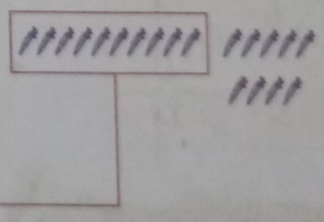
Step 1: Add the ones.

	Tens	Ones
	1	5
+		4
		9



Step 2: Add the tens.

	Tens	Ones
	1	5
+		4
	1	9



Shelly has 19 hair clips now.

Teacher's Support

Remind the students of number bonds of 10 and encourage them to use their own mental strategies for adding numbers.

Practice

Arrange the following numbers in proper columns and add.

1. 13 and 4

2. 24 and 5

Watch Your Step!

15 and 4 are added

like this →

$$\begin{array}{r} 15 \\ +\ 4 \\ \hline 19 \end{array}$$

not like this →

$$\begin{array}{r} 15 \\ +4 \\ \hline 55 \end{array}$$

Checkpoint 6A

Add the following. One is done for you.

1.

	Tens	Ones
	1	8
+		1
	1	9

2.

	Tens	Ones
	4	5
+		3
	4	8

3.

	Tens	Ones
	5	1
+		8
	5	9

4.

	Tens	Ones
	5	2
+		3
	5	5

5.

	Tens	Ones
	7	5
+		0
	7	5

6.

	Tens	Ones
	6	3
+		4
	6	7

7.

	Tens	Ones
	4	4
+		1
	4	5

8.

	Tens	Ones
	3	2
+		7
	3	9

9.

	Tens	Ones
	6	4
+		0
	6	4

10.

	Tens	Ones
	2	2
+		7
	2	9

11.

	Tens	Ones
	6	0
+		9
	6	9

12.

	Tens	Ones
	4	3
+		6
	4	9

Did You Know?

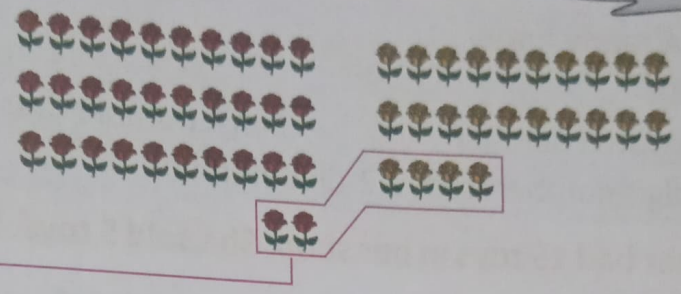
- 49 and 50 are the two consecutive numbers (one after the other) that add up to the greatest 2-digit number 99.
- There are 49 numbers from 3 to 99 that can be written as the sum of two consecutive numbers. 1 + 2 = 3, 2 + 3 = 5 and so on up to 49 + 50 = 99.

Adding 2-Digit Numbers

A florist has 32 red roses and 24 orange roses.
How many roses does he have altogether?
To know how many roses does the florist have in all, we add 32 and 24 as follows in two steps.

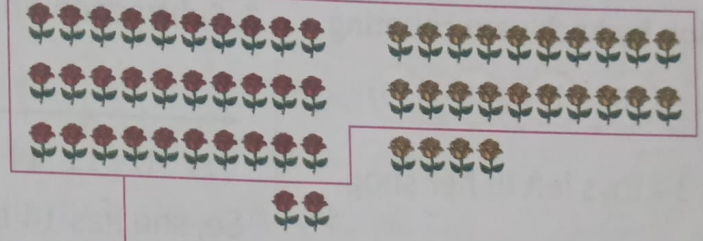
Step 1: Add the ones.

	Tens	Ones
	3	2
+	2	4
		6



Step 2: Add the tens.

	Tens	Ones
	3	2
+	2	4
	5	6



Thus, the florist has 56 roses altogether.

Practice

Arrange 43 and 13 in proper columns and add.

	Tens	Ones
+		

Checkpoint 6B

Add the following. One is done for you.

1.

	Tens	Ones
	1	8
+	2	1
	3	9

2.

	Tens	Ones
	4	1
+	5	3
	9	4

3.

	Tens	Ones
	5	3
+	2	6
	7	9

4.

	Tens	Ones
	7	5
+	1	3
	8	8

5.

Tens	Ones
3	6
+ 1	0
4	6

6.

Tens	Ones
1	4
+ 2	5
3	9

7.

Tens	Ones
3	6
+ 2	1
5	7

8.

Tens	Ones
4	7
+ 2	2
6	9

Warm-up Subtraction

What we already know

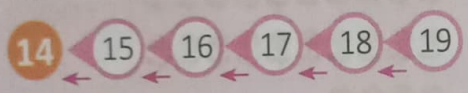
Subtraction:

- by backward counting
- on a number line
- of a 1-digit number from a 2-digit number

A shopkeeper had 19 toys in her shop. She sold 5 toys. How many toys are left in her shop?

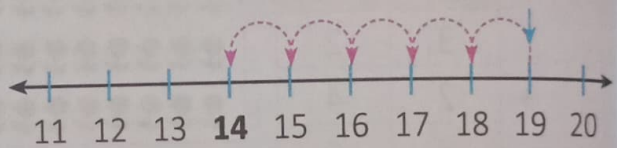
We can find the answer by any one of these methods.

1. Subtraction by backward counting



So, she has 14 toys left in her shop.

2. Subtraction on a number line



So, she has 14 toys left in her shop.

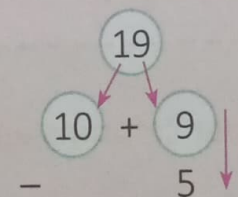
3. Subtraction by subtracting the ones first

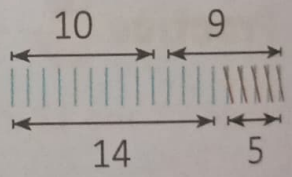
Tens	Ones
1	9
−	5
1	4

Subtracting the ones first, then the tens.

So, she has 14 toys left in her shop.

4. Subtraction by breaking into 10s and 1s





So, she has 14 toys left in her shop.

Teacher's Support

Discuss the daily life situations where both addition and subtraction work. For example, a shopkeeper sold 5 toys. She has 13 toys left. How many toys did she have in the beginning? If students focus on the key word "left" then they will try to do by subtraction. Help the students to understand what is required in the situation 'more' or 'less'? So, adding 13 and 5 will work as well as counting forward

from one number to another 13 14 15 16 17 18 will also work.

Warm-up Exercise

Subtract the following. One is done for you.

1.

	Tens	Ones
	1	6
−		5
	1	1

2.

	Tens	Ones
	1	8
−		3
	1	5

3.

	Tens	Ones
	2	0
−		0
	2	0

4.

	Tens	Ones
	1	9
−		9
	1	0

5.

	Tens	Ones
	1	4
−		1
	1	3

6.

	Tens	Ones
	1	1
−		1
	1	0

7.

	Tens	Ones
	1	5
−		1
	1	4

8.

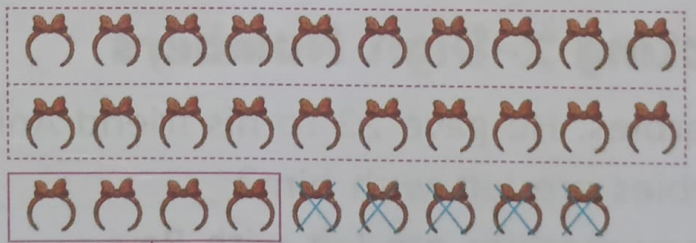
	Tens	Ones
	1	7
−		4
	1	3

Subtracting a 1-Digit Number from a 2-Digit Number

Somya had a collection of 29 hair bands.
She lost 5. How many hair bands are left with her?
To find the number of hair bands left with Somya, we subtract 5 from 29 in two steps as follows.

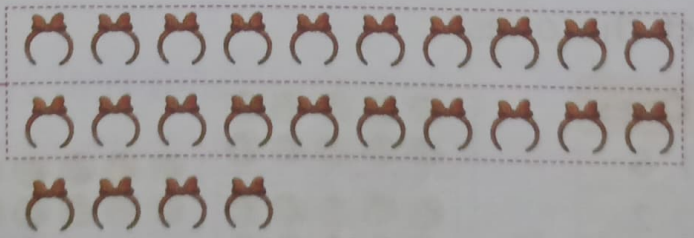
Step 1: Subtract the ones.

	Tens	Ones
	2	9
−		5
		4



Step 2: Subtract the tens.

	Tens	Ones
	2	9
−		5
	2	4



Thus, Somya is left with 24 hair bands.

Practice

Write 5 below 27 in proper columns and subtract.

	Tens	Ones
	2	7
−		5
	2	2

Checkpoint 6C

Subtract the following. One is done for you.

1.

	Tens	Ones
	2	8
−		3
	2	5

2.

	Tens	Ones
	1	6
−		4
	1	2

3.

	Tens	Ones
	3	0
−		0
	3	0

4.

	Tens	Ones
	3	5
−		4
	3	1

5.

	Tens	Ones
	1	8
−		1
	1	7

6.

	Tens	Ones
	3	7
−		5
	3	2

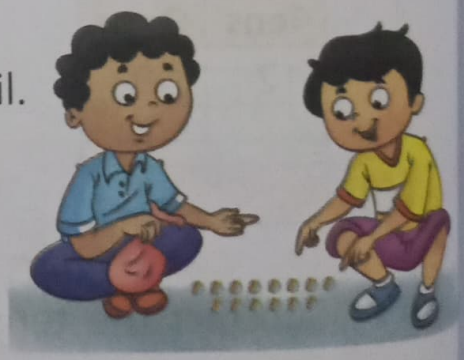
7.

	Tens	Ones
	5	9
−		1
	5	8

8.

	Tens	Ones
	6	8
−		6
	6	2

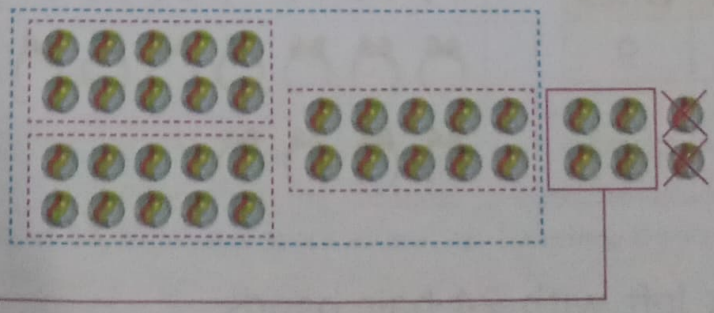
Subtracting 2-Digit Numbers



Ravi had 36 marbles. He gave 22 to his friend Anil.
How many marbles are left with him?
To find how many marbles are left with Ravi, we subtract 22 from 36 in two steps as follows.

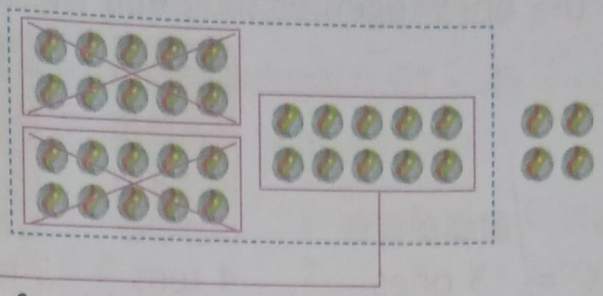
Step 1: Subtract the ones.

	Tens	Ones
	3	6
−	2	2
		4



Step 2: Subtract the tens.

	Tens	Ones
	3	6
−	2	2
	1	4



Thus, 14 marbles are left with Ravi.

Practice

Subtract 13 from 45 by writing the smaller number below the bigger number in proper columns.

Checkpoint 60

Subtract the following. One is done for you.

1.

	Tens	Ones
	2	8
−	1	5
	1	3

2.

	Tens	Ones
	5	5
−	2	5
	3	0

3.

	Tens	Ones
	8	0
−	6	0
	2	0

4.

	Tens	Ones
	3	7
−	2	2
	1	5

5.

	Tens	Ones
	4	6
−	3	5
	1	1

6.

	Tens	Ones
	5	9
−	1	1
	4	8

7.

	Tens	Ones
	6	6
−	2	5
	4	1

8.

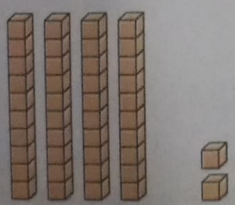
	Tens	Ones
	7	8
−	5	3
	2	5

More Ways of Addition and Subtraction

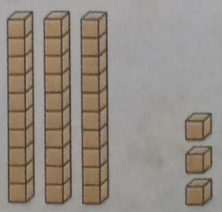
Addition by splitting the numbers pictorially

Add 42 and 33.

Step 1: Split the numbers into tens and ones.



42 = 4 tens + 2 ones



33 = 3 tens + 3 ones

Here,  = 1 ten

and  = 1 one

Addition and subtraction using expanded form

Add: 23 + 46

Tens	Ones
2	3
4	6
6	9

= 2 tens + 3 ones
= 4 tens + 6 ones
= 6 tens + 9 ones
= 69

Subtract: 69 – 23

Tens	Ones
6	9
2	3
4	6

= 6 tens + 9 ones (Subtract tens ↓)
= 2 tens + 3 ones (Subtract ones ↓)
= 4 tens + 6 ones
= 46

Checkpoint 6E

1. **Add by splitting numbers in your notebook.**
   (a) 46 and 22 (b) 62 and 33 (c) 40 and 50
   (d) 66 and 33 (e) 80 and 11 (f) 12 and 67

2. **Subtract by splitting numbers in your notebook.**
   (a) 10 from 25 (b) 24 from 78 (c) 20 from 50
   (d) 21 from 69 (e) 46 from 58 (f) 57 from 98

3. **Represent the following addition or subtraction sums using expanded form. One is done for you.**
   (a) 73 – 21 = 52 (b) 58 + 21 = 79 (c) 67 – 57 = 10

(a)
73 = 70 + 3 (Subtract tens ↓, Subtract ones ↓)
−21 = 20 + 1
52 = 50 + 2

(b)
58 = 50 + 8
+21 = 20 + 1
79 = 70 + 9

(c)
67 = 60 + 7
−57 = 50 + 7
10 = 10 + 0

Addition and Subtraction Stories in Real Life

Checkpoint 6F

1. Isha saw 21 deer and 8 lions in a zoo.
   Isha saw 29 animals in the zoo.

+

Tens	Ones
2	1
	8
2	9

2. My mother cut a vanilla cake into 14 pieces and a pineapple cake into 15 pieces for the guests.
There are 29 cake pieces in all for the guests.

	Tens	Ones
	1	4
+	1	5
	2	9

3. Ansh jumped 31 times and Sandhya jumped 32 times in a Bounce House.
They jumped 63 times altogether.

	Tens	Ones
	3	1
+	3	2
	6	3

4. Seema bought 48 pencils for a drawing competition. 5 pencils were not used.
43 pencils were used.

	Tens	Ones
	4	8
−		5
	4	3

5. A balloon seller had 38 balloons. He sold 6 balloons.
32 balloons are left with the balloon seller.

	Tens	Ones
	3	8
−		6
	3	2

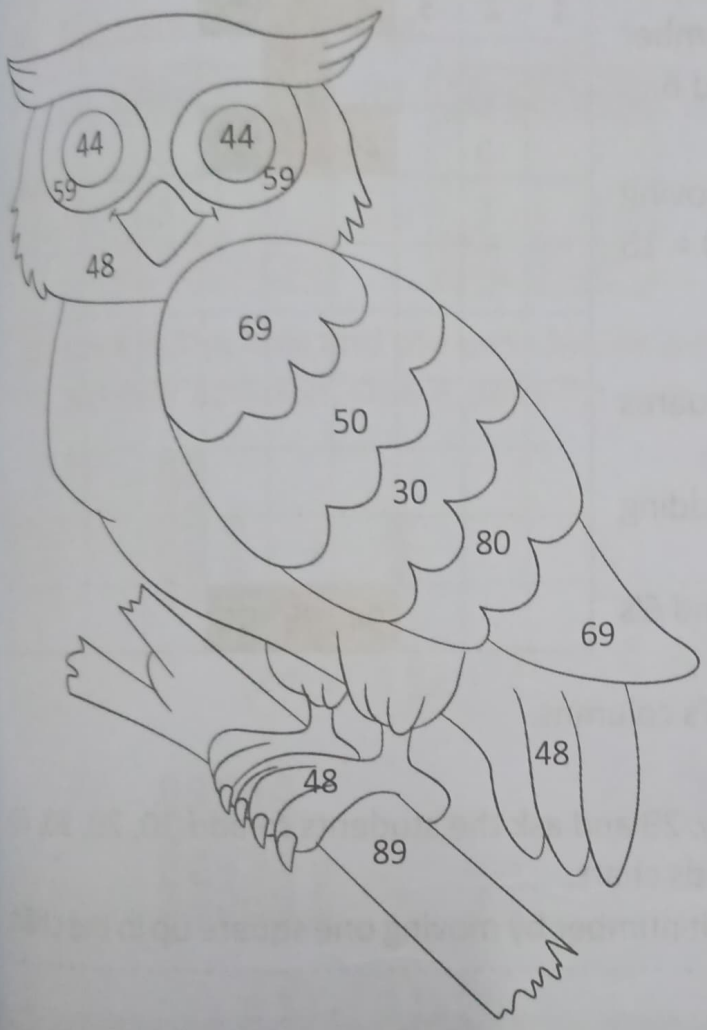
6. There were 33 parents on Maths Whatsapp Group. 3 left the group.
30 parents are there in the group now.

	Tens	Ones
	3	3
−		3
	3	0

Smart Time (Art and Craft Connect)

AIL

Solve each of the following '+' or '–' questions. Search the sum and the difference in the picture of owl, then colour as per the colour scheme given.



Black

	Tens	Ones
	1	2
+	3	2
	4	4

	Tens	Ones
	3	2
+	1	2
	4	4

Yellow

	Tens	Ones
	4	9
+	1	0
	5	9

	Tens	Ones
	1	0
+	4	9
	5	9

Blue

	Tens	Ones
	4	3
+	2	6
	6	9

	Tens	Ones
	7	9
–	1	0
	6	9

Brown

	Tens	Ones
	8	0
–	3	0
	5	0

	Tens	Ones
	8	0
–	5	0
	3	0

Pink

	Tens	Ones
	3	6
+	1	2
	4	8

	Tens	Ones
	4	8
–		0
	4	8

	Tens	Ones
	4	8
+		0
	4	8

	Tens	Ones
	3	0
+	5	0
	8	0

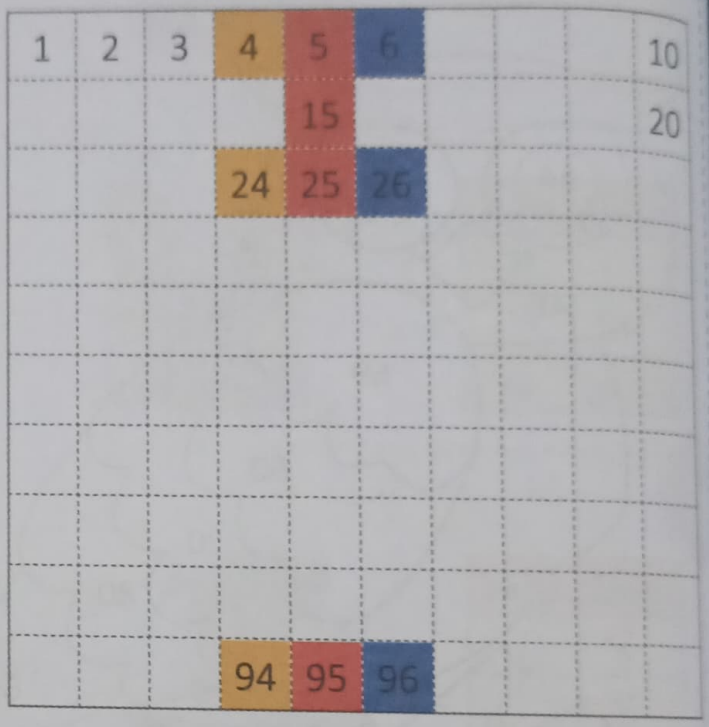
	Tens	Ones
	6	3
+	2	6
	8	9

Let Us Do

EL

Learning Objective: Exploring adding tens in a "Hundreds chart"
Preparation: The teacher prepares a sufficiently big "Hundreds chart"
Working:

- Ask the students to locate a number on the number chart, say, 5, a number before and after 5, that is, 4 and 6.
- Colour the 5's column red.
- Ask them to add 10 to 5 by moving down one square to get 5 + 10 = 15 (as shown above in the chart).
- Ask them to add 20 to 5.
- Students will move two squares down.
- Similarly, three steps down for adding 30 to 5 and so on.
- Colour the 4's column yellow and 6's column blue.
- Repeat the same with 4's and 6's columns.



Variations:

- Locate any random number, say, 29 and ask the students to add 10, 20, 30, 40, 50, 60 and 70 to it on a Hundreds chart.
- Do 'subtracting 10' from a 2-digit number by moving one square up in the chart.

Let Us Assess

1. Add the following using forward counting.

(a) 6 + 3 = 9 (b) 5 + 3 = 8 (c) 15 + 0 = 15 (d) 11 + 1 = 12

(e) 86 + 2 = 88 (f) 74 + 3 = 77 (g) 55 + 4 = 59 (h) 91 + 7 = 98

2. **Add the following.**

(a)

Tens	Ones
5	2
+	2
5	4

(b)

Tens	Ones
6	1
+	2
6	3

(c)

Tens	Ones
7	1
+ 1	7
8	8

(d)

Tens	Ones
1	5
+ 3	4
4	9

3. **Subtract the following.**

(a)

Tens	Ones
5	0
− 3	0
2	0

(b)

Tens	Ones
6	7
− 3	2
3	5

(c)

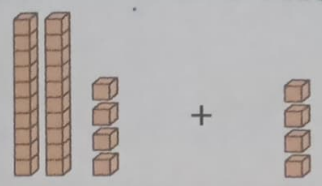
Tens	Ones
6	4
− 5	1
1	3

(d)

Tens	Ones
3	5
− 3	4
0	1

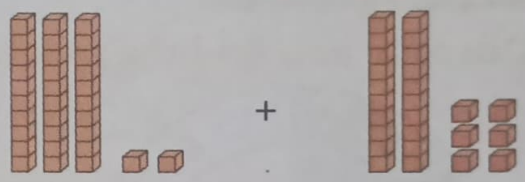
4. **Look at the tens and the ones blocks in the given pictures and complete the number addition. One is done for you.**

(a)



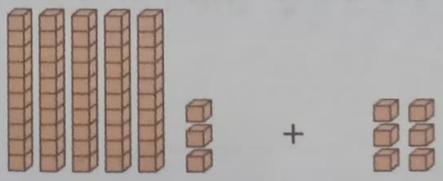
24 + 4 = 28

(b)



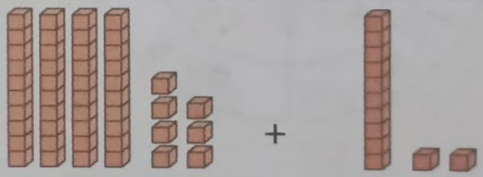
32 + 26 = 58

(c)



53 + 6 = 59

(d)



47 + 12 = 59

5. A storybook has some number of pages. Rupali read 42 pages but 41 pages are still left to be read. How many pages are there in the storybook?

Tens	Ones
4	2
+ 4	1
8	3

Tens	Ones
2	9
− 1	8
1	1

6. There were 29 children in a bus. At the next stop 18 children got down. How many children were left in the bus?

7. The sum of two numbers is 99. If one number is 55, find the other number.

Tens	Ones
9	9
5	5
4	4

HOTS

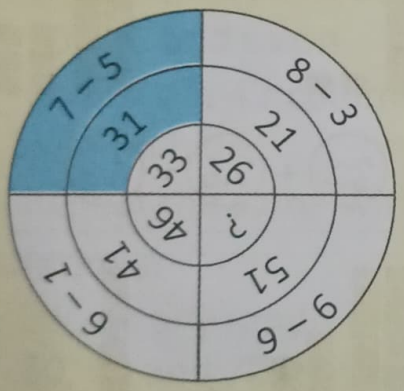
21st CS

1. There are 80 sheep in a herd, 20 got lost, 30 more joined. How many sheep are there in the herd now? _____

2. Which all 2-digit numbers remain the same when the order of their digits is reversed? How many such numbers can you write? Which two of these add up to the largest 2-digit number? _____

Mind Grind

Observe and find the missing number.



Hint:

Solve each section as:

First subtract 7 – 5 = 2, then add 2 + 31 = 33.

Objective Moves

1. **Choose the correct statement.**

   (a) The sum of two 1-digit numbers is always a 1-digit number.

   (b) When a 1-digit number is added to 10, the ones digit changes but the tens digit remains 1 in the sum.

2. **Tick (✓) the correct option.**

   (a) 4 added to 74 is

   70 ☐ 7 ☐ 4 ☐ 78 ☐

   (b) 10 less than 91 is

   80 ☐ 89 ☐ 82 ☐ 81 ☐