3 ADDITION AND SUBTRACTION

Addition

Four vendors went to a coconut grove to buy coconuts. Each one needed 700 coconuts. Help them to select the heaps.

First vendor	Second vendor	Third vendor	Fourth vendor
350 320 + 30	400 + 300		
700	700	700	700

Write the missing numbers in the magic squares for the given total.

Total 45

16	11	18
17	15	13
12	19	14

Total 210

80	30	
90	70	50
	110	60

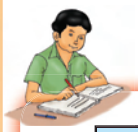
Total 165

65	15	
75	55	35
	95	

Fill in the boxes.

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

The sum of any number and zero is the number itself.
The sum of two numbers does not change even if we change the order of the numbers.



Practice

1)

	H	T	O
	3	2	4
+	5	7	5

2)

	H	T	O
	6	0	0
+	2	3	2

3)

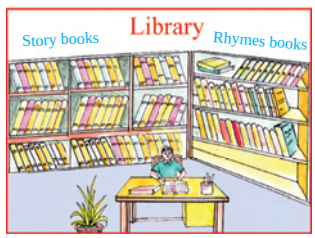
	H	T	O
	5	3	6
+	3	0	1

4)

	H	T	O
	7	0	2
+	2	1	4

Addition without carrying

1) A library has 3242 story books and 435 rhymes books. Find the total number of books.



Solution:

To find the total number of books, we have to add the number of story books and rhymes books.

		Th	H	T	O		
Number of story books	=	3	2	4	2	=	3000 + 200 + 40 + 2
Number of rhymes books	= +		4	3	5	=	400 + 30 + 5
Total number of books	=	3	6	7	7	=	3000 + 600 + 70 + 7

Total number of books in the library = 3677

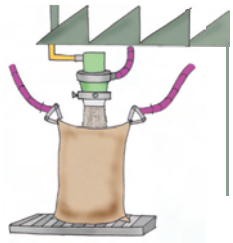
Another method:

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

Steps
* Add ones
* Add tens
* Add hundreds
* Add thousands

MATHEMATICS

2) A factory produced 1154 bags of fertilizer on the first day and 2832 bags on the second day. Find the total number of bags of fertilizer.



Solution:

Fertilizer produced on first day	=	1154
Fertilizer produced on second day	= +	2832
Total number of bags of fertilizer	=	3986

3986 bags of fertilizer are produced.

Practice

1)

	Th	H	T	O
	2	4	6	3
+	4	2	3	0

2)

	Th	H	T	O
	2	2	0	4
+	3	4	8	5

3)

	Th	H	T	O
	4	5	0	2
+	5	3	0	4

4)

	Th	H	T	O
	8	4	1	0
+	1	0	6	7

5)

	Th	H	T	O
	2	0	0	0
+	4	0	0	0

6)

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

7) 

In a factory 3850 persons worked in the first shift and 3106 persons worked in the second shift. Find the total number of persons.

8) In a function 2274 people had breakfast and 3015 people had lunch. Find the total number of people in the function.

Recall and write

10 ones = 1 ten
70 ones = _____
25 ones = 2 tens 5 ones
43 ones = _____
10 tens = 1 hundred
50 tens = _____

36 tens = 3 hundreds 6 tens
29 tens = _____
10 hundreds = 1 thousand
40 hundreds = _____
78 hundreds = 7 thousands 8 hundreds
64 hundreds = _____

Addition with carrying

Balaji and Ramji bought two mobiles. The cost of mobiles are ₹ 2495 and ₹ 1628 respectively. Find the total cost of the mobiles.

Solution:

Cost of Balaji's mobile = ₹ 2495
Cost of Ramji's mobile = ₹ 1628
To find out the total cost, add the cost of the mobiles.

	Th	H	T	O
			(1)	
	2	4	9	5
+	1	6	2	8
				3

Step 1

Add the ones
5 ones + 8 ones = 13 ones
13 ones = 1 ten 3 ones
Write 3 under the ones place
Carry (1) to tens place

	Th	H	T	O
		(1)	(1)	
	2	4	9	5
+	1	6	2	8
			2	3

Step 2

Add the tens
(1) ten + 9 tens + 2 tens = 12 tens
12 tens = 1 hundred 2 tens
Write 2 under the tens place
Carry (1) to hundreds place

	Th	H	T	O
	(1)	(1)	(1)	
	2	4	9	5
+	1	6	2	8
		1	2	3

Step 3

Add the hundreds
(1) hundred + 4 hundreds + 6 hundreds =11 hundreds
11 hundreds = 1 thousand 1 hundred
Write 1 under the hundreds place
Carry (1) to thousands place

	Th	H	T	O
	(1)	(1)	(1)	
	2	4	9	5
+	1	6	2	8
	4	1	2	3

Step 4

Add the thousands
(1) thousand +2 thousands+1 thousand = 4 thousands
Write 4 under the thousands place

Total cost of 2 mobiles is ₹ 4123

MATHEMATICS

Practice

1)

	Th	H	T	O
	4	3	2	7
+	2	8	6	2

2)

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

3)

	Th	H	T	O
	3	5	4	6
+	4	6	8	7

4)

	Th	H	T	O
	5	3	6	9
+	3	2	4	3

5)

	Th	H	T	O
	4	2	5	9
+	3	8	3	5

6)

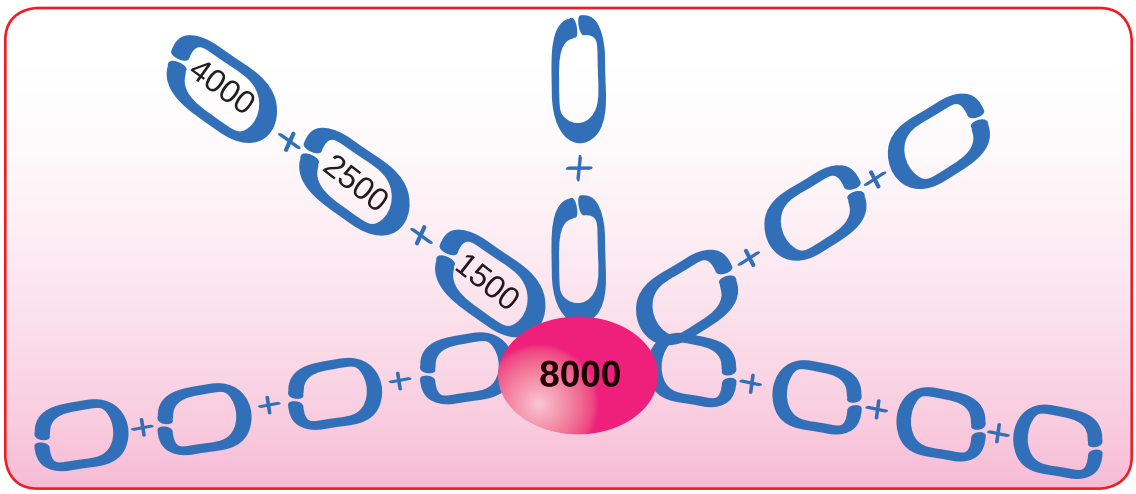
	Th	H	T	O
	3	0	9	4
+	4	6	3	8

7) In a circus 2625 persons visited the noon show, and 3768 persons visited the night show. Find the total number of persons.

8) In a mango grove, 1243 malgova, 2132 sendura and 2644 neelam mangoes were plucked from mango trees. Find the total number of mangoes plucked.

Lab activity

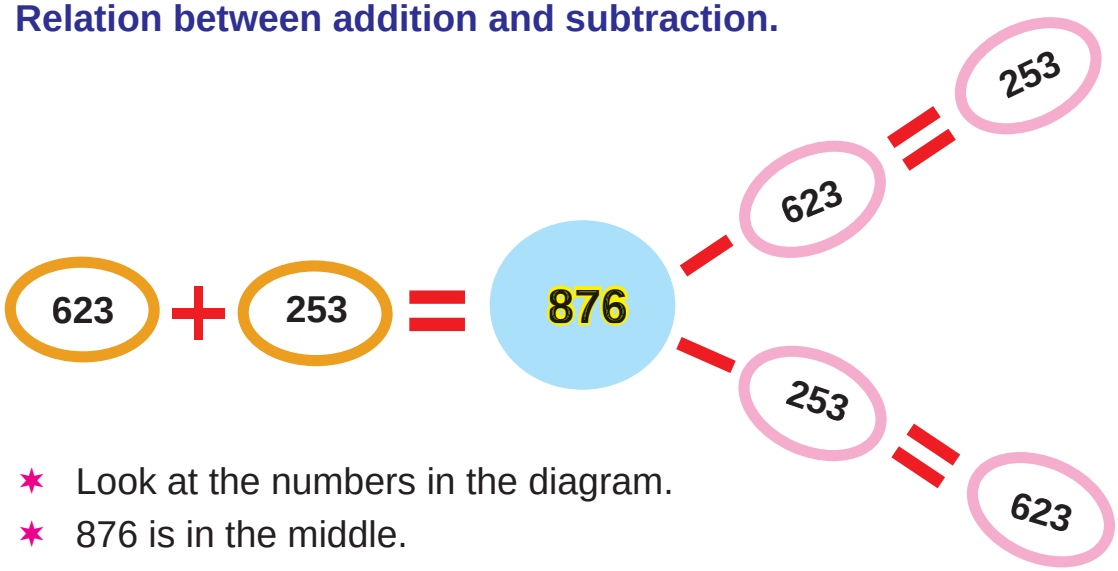
1) Fill up the addition chain



2) Take two sets of number cards from 0 to 9. Using the number cards form eight 4 digit numbers. Take two numbers at a time and add.

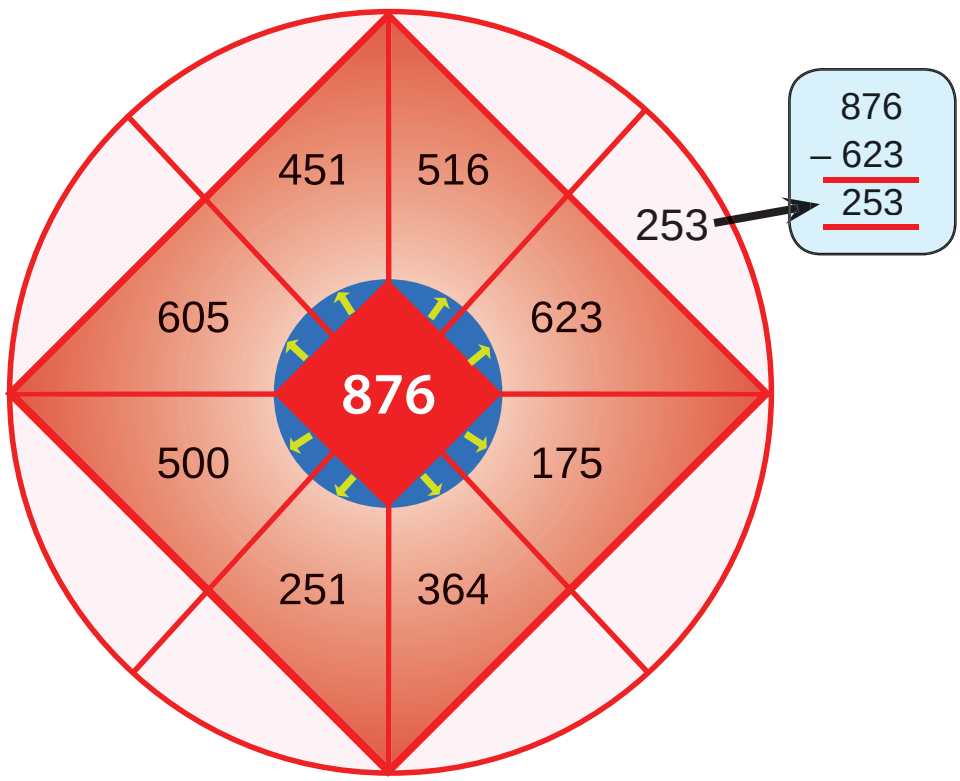
Subtraction

Relation between addition and subtraction.



- Look at the numbers in the diagram.
- 876 is in the middle.
- 876 is written as the addition of two numbers.
- Every addition has two subtractions.

Write the missing numbers by subtraction.



Subtraction without grouping

Bharath purchased an aircooler and a water heater for his house. The total cost is ₹ 8965. Find the cost of water heater, if the cost of the air cooler is ₹ 4650.

Solution:

Total cost of the air cooler and the water heater = ₹ 8965

Cost of the air cooler = ₹ 4650

The cost of water heater = ₹ 8965 – ₹ 4650

	Th	H	T	O
	8	9	6	5
–	4	6	5	0
				5

Step 1

Subtract the ones

5 ones – 0 ones = 5 ones

Write 5 in the ones place.

	Th	H	T	O
	8	9	6	5
–	4	6	5	0
			1	5

Step 2

Subtract the tens

6 tens – 5 tens = 1 ten.

Write 1 in the tens place.

	Th	H	T	O
	8	9	6	5
–	4	6	5	0
		3	1	5

Step 3

Subtract the hundreds

9 hundreds – 6 hundreds = 3 hundreds.

Write 3 in the hundreds place.

	Th	H	T	O
	8	9	6	5
–	4	6	5	0
	4	3	1	5

Step 4

Subtract the thousands

8 thousands – 4 thousands = 4 thousands.

Write 4 in the thousands place.

The cost of water heater is ₹ 4315.

Practice

1) 9865 – 2334

2) 7650 – 2310

3) 4030 – 2010

4) 8897 – 3405

5) 8743 – 1212

6) 7329 – 2018

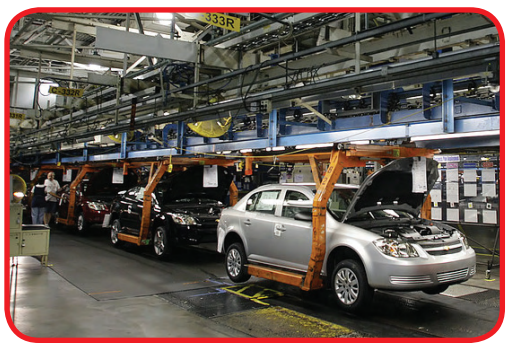
7) 9000 – 7000

8) 5678 – 2400

9) Population of a village is 8625. Of them 4314 are working in fields. Find the remaining population.

10) Number of vehicles parked in a shed is 2448. If 1236 vehicles are taken out, calculate the vehicles left in the shed.

11) A car manufacturing company produced 2680 cars. 1570 cars are sold. How many cars are left in the company?



MATHEMATICS

Subtraction with grouping

There were 8260 tea packets in a van. Of these 6984 tea packets were sold out. Find the remaining tea packets.

Solution:

Tea packets in the van = 8260
Sold tea packets = 6984
Remaining tea packets = 8260 – 6984

	Th	H	T	O
			5	10
	8	2	~~6~~	~~0~~
–	6	9	8	4
				6

Step 1

Subtract the ones

4 cannot be subtracted from 0

Take 1 ten from 6 tens, (we get 1 ten =10 ones)

10 ones – 4 ones = 6 ones

	Th	H	T	O
		1	15	10
	8	~~2~~	~~6~~	~~0~~
–	6	9	8	4
			7	6

Step 2

Subtract the tens

8 cannot be subtracted from 5

Take 1hundred from 2 hundreds,

(1hundred = 10 tens) and adding with 5 tens

we get 15 tens – 8 tens = 7 tens

	Th	H	T	O
	7	11	15	10
	~~8~~	~~2~~	~~6~~	~~0~~
–	6	9	8	4
		2	7	6

Step 3

Subtract the hundreds

9 cannot be subtracted from 1

Take 1 thousand from 8 thousands,

(1 thousand = 10 hundreds) adding with 1 hundred

we get 11 hundreds – 9 hundreds = 2 hundreds

	Th	H	T	O
	7	11	15	10
	~~8~~	~~2~~	~~6~~	~~0~~
–	6	9	8	4
	1	2	7	6

Step 4

Subtract the thousands

7 thousands – 6 thousands = 1 thousand

The remaining tea packets = 1276

Practice

1)

	Th	H	T	O
	5	2	8	6
−	3	4	5	2

2)

	Th	H	T	O
	7	3	4	5
−	2	6	5	2

3)

	Th	H	T	O
	9	2	5	6
−	4	6	7	8

4)

	Th	H	T	O
	8	5	6	3
−	3	7	6	8

5)

	Th	H	T	O
	5	0	5	0
−	2	2	4	0

6)

	Th	H	T	O
	7	0	6	4
−	3	4	3	7

7)

	Th	H	T	O
	6	4	0	0
−	2	1	2	0

8)

	Th	H	T	O
	6	0	0	0
−	2	1	5	0

H	K	W	D	R	O	R	A
2810	4795	1834	3850	4280	4693	4578	3627

Write the letters for the answers from 1 to 8 in the box and read.

9) The sum of two numbers is 3527. If one number is 2685, find the other number.

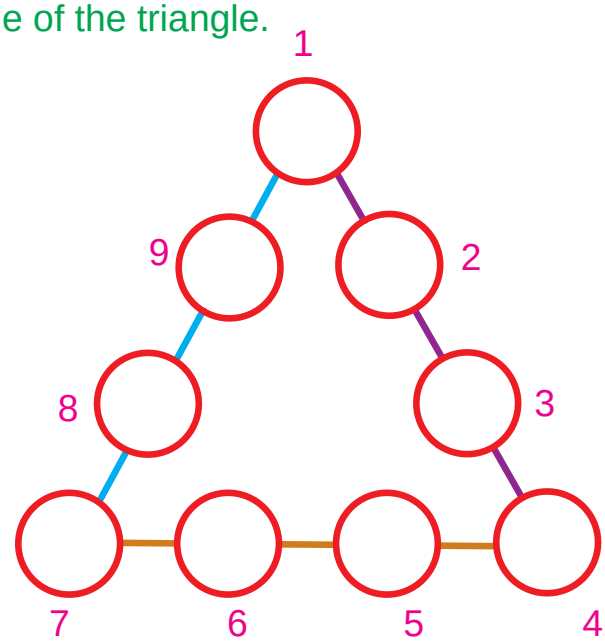
10) 2456 passengers travelled in a train. Of them, 1387 passengers have reserved their tickets, how many passengers have not reserved?

11) A lungi merchant bought 6570 lungies. If he was left with 1898 lungies, then how many lungies were sold?

12) In a two wheeler shop 543 vehicles were there during the beginning of a month. Again 1475 vehicles arrived for the sale. If 1682 vehicles are sold, how many vehicles are left at the end of the month?

Oral sums

- Do the given problems and enter the result in the given circles.
- Add the numbers in each side of the triangle.
- What do you observe?



1) In a street there are 40 houses in the left side and 30 houses in the right side. What is the total number of houses?

2) In a bus 60 passengers are sitting and 30 passengers are standing. How many passengers are there in the bus?

3) In an aeroplane there are 200 passengers and 20 workers. How many are there in that aeroplane?

4) There are 1000 roses in a flower shop. 300 roses are used to make garlands. How many roses are left?

5) 30 laddus are issued from 100 laddus. How many laddus are remaining?

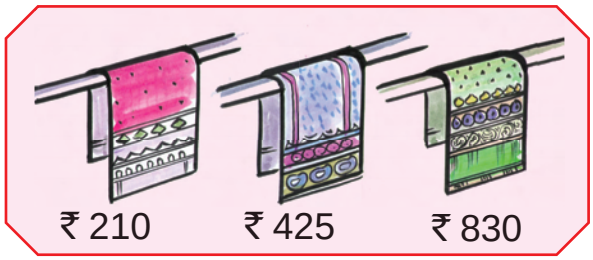
6) 20 boys and 30 girls are studying in a class. What is the total number of students?

7) A jack fruit has 160 pods in it and another jack fruit has 100 pods. What is the total number of pods?

8) 700 lemons were bought to prepare pickle. Out of these 200 were used. How many lemons were left?

9) In a shop there were 500 shirts. 250 shirts were sold. How many shirts were left.

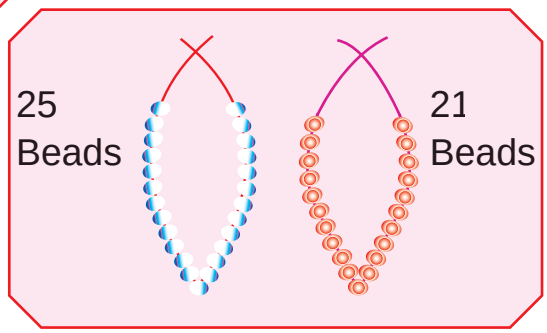
Observe the following pictures and frame the problems.



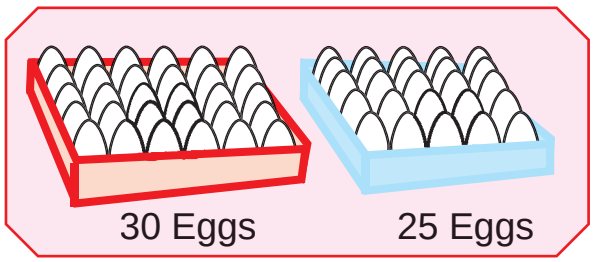
Problem

What is the total cost of 3 sarees?

Problem

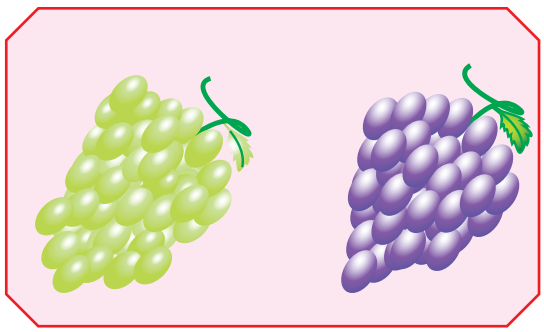


Problem

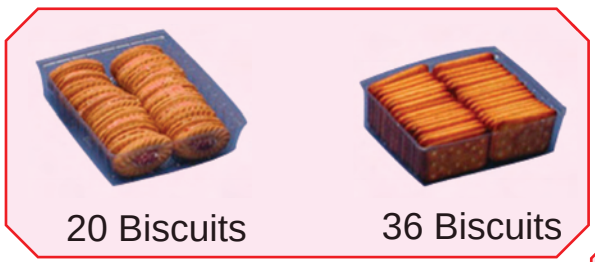


Problem

There are 70 green grapes and 60 black grapes. How many green grapes are more than black grapes?



Problem



Problem

Estimation in addition and subtraction

Estimation in addition

Balachandar has to travel 14 km by bus and 18 km by train to reach his office. Estimate the total distance he has to travel.

Mode of travel	Actual distance	Estimated distance
Bus	14 km	10 km
Train	18 km	20 km
Total distance	32 km	30 km

The difference between
actual distance and estimated distance = 32 km – 30 km
Difference = 2 km

Practice

A basket contains 83 kg of tamarind and another basket contains 46 kg of tamarind. Estimate the total weight of tamarind. Find the difference between actual weight and estimated weight.

Estimation in subtraction

A goldsmith had 88 g of gold coins. He used 63 g of gold coins to make different patterns of ornaments. Estimate the weight of gold coins left with him.

Coins	Actual weight	Estimated weight
Total	88 g	90 g
Used	63 g	60 g
Left	25 g	30 g

The difference between actual weight and estimated weight

= 30 g – 25 g

Difference = 5 g

Practice

There were 76 kg of cakes in a bakery shop. In two days 43 kg were sold. Estimate the weight of the cakes left.

REVISION

Do the sums

1) 3462 + 2524 = _____

2) 2835 + 4124 = _____

3) 3654 + 4303 = _____

4) 1347 + 6532 = _____

5) 2289 + 7642 = _____

6) 3009 + 4006 = _____

7) 2010 + 5297 = _____

8) 1800 + 3589 = _____

9) A company produced 4152 dresses for boys and 2340 dresses for girls. Find the total number of dresses produced.

10) A factory manufactured 2436 mixies last week and 3527 mixies this week. How many mixies were manufactured altogether?

11) 8000 – 3000 = _____

12) 5900 – 4700 = _____

13) 6058 – 2035 = _____

14) 7090 – 5040 = _____

15) 6437 – 2329 = _____

16) 8942 – 3424 = _____

17) 7826 – 3918 = _____

18) 6243 – 2462 = _____

19) A farmer 6475 bags of carrot had taken to the market. He sold 5243 bags. How many bags of carrot are left?

20) In a school 2238 students went to various educational tours last year. If 1356 students went to some tours this year, how many more students went last year?

4 MEASURING LENGTH

FANCY STORE

Friends are talking about the stationary items which they have bought.

What did you buy?

I bought hair pin and pencils.

I bought pencil eraser which is small in length.

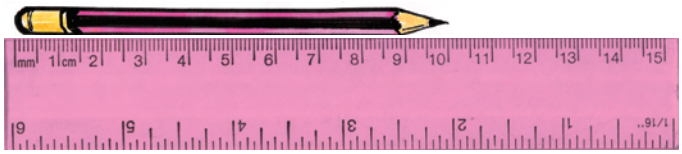
I bought ribbon. It is longer in length.

Shall we measure and see...

Pencil, ribbon, cloth etc... are measured by length.

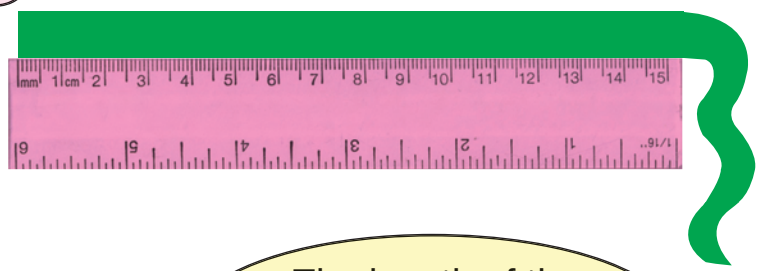
Measuring tools

Shall we measure with scale?



Pencil is 10 centimetre long.

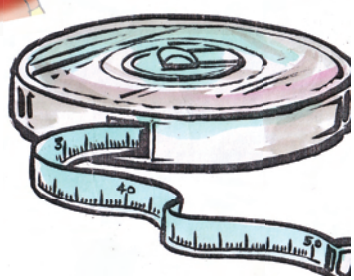
Now can we measure ribbon by using tape?



The length of the ribbon is more than the length of the scale.

Is there any other tools to measure?

We can also use the tape to measure.



We measure the length of a play ground with a measuring tape.

Length of smaller objects are measured in centimetre

Centimetre can be written as ‘cm’.

Take the things given in pictures and write the approximate and actual length.

1) Length of a chalk = 8 cm

2) Length of a pen =

3) Length of a spoon =

4) Length of a box =

5) Length of a book =

Relation between metre and centimetre

Archana is measuring her friend's height.

Height is measured in metre.

1 metre = 100 centimetre

Metre can be written as 'm'.

Conversion of metre into centimetre

Convert 3 m into cm.

1 m = 100 cm

3 m = 3 × 100 cm

3 m = 300 cm

Convert 15 m into cm.

1 m = 100 cm

15 m = 15 × 100 cm

15 m = 1500 cm

Convert 6m 20cm into cm

1 m = 100 cm

step 1

6 m = 6 × 100 cm

6 m = 600 cm

step 2

600 cm

+ 20 cm

620 cm

6m 20cm = 620 cm

To change m into cm, multiply by 100

Practice

1) 2 m = 200 cm

2) 5 m = _____cm

3) 25 m = 2500 cm

4) 48 m = _____cm

5) 3m 40cm = 340 cm

6) 7m 10cm = ____cm

7) 8m 7cm = 807 cm

8) 6m 5cm = ____cm

Conversion of centimetre into metre

Convert 500 cm into m

100cm = 1m

500 ÷ 100 = 5

500cm = 5m

Convert 725 cm into m

100cm = 1m

725cm = 700 cm + 25 cm = 7 m + 25 cm

725cm = 7m 25cm

To change cm into m, divide by 100