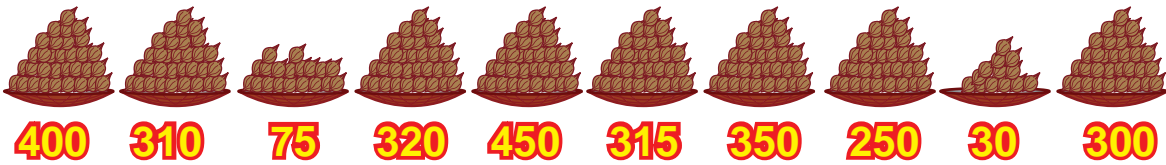


3

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.

$0 + 1 = 1$

$2 + 4 = 6$

$4 + 5 = 9 = 5 + \square$

$1 + 0 = \square$

$4 + 2 = \square$

$5 + 3 = 8 = \square + 5$

$2 + 0 = 2$

$0 + 0 = 0$

$2 + 6 = 8 = 6 + \square$

$0 + 2 = \square$

$0 + 3 = \square$

$7 + 2 = 9 = \square + 7$

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.



Number of story books	=	Th	H	T	O	=	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**

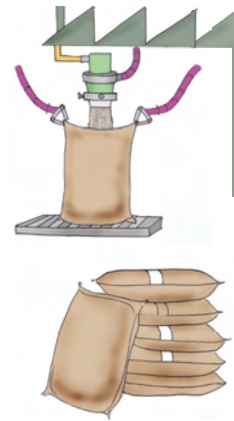
Another method:

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

Steps

- * Add ones
- * Add tens
- * Add hundreds
- * Add thousands

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:

$$\begin{array}{r} \text{Fertilizer produced on first day} = 1154 \\ \text{Fertilizer produced on second day} = + 2832 \\ \hline \text{Total number of bags of fertilizer} = 3986 \end{array}$$

3986 bags of fertilizer are produced.



Practice

1)

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

2)

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

3)

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

4)

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

5)

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

6)

Th	H	T	O
5	1	2	1
+	2	3	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



Practice

1)

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

2)

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

3)

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

4)

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

5)

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

6)

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

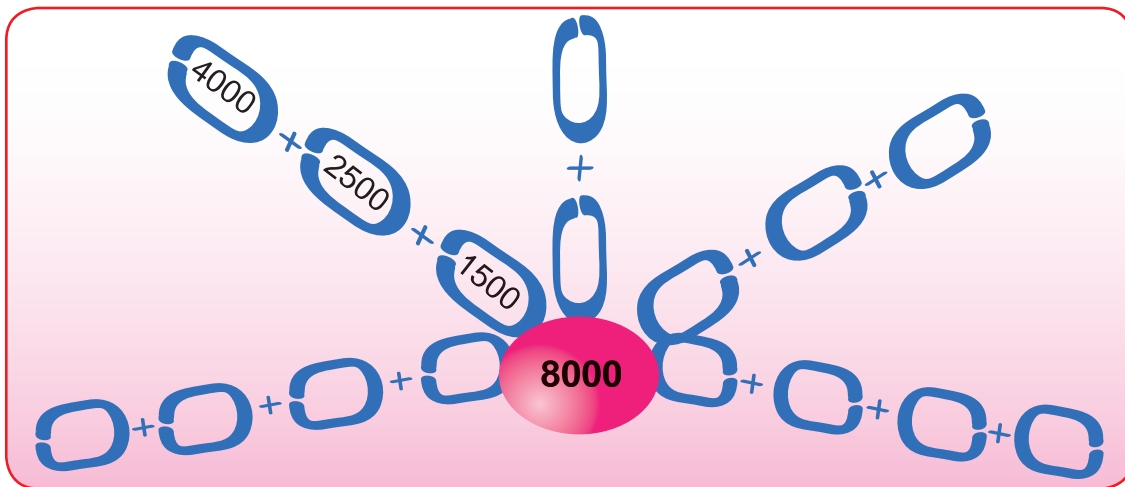
7) In a circus 2625 persons visited the noon show, and 3768 persons visited the night show. Find the total number of persons.



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

Lab activity

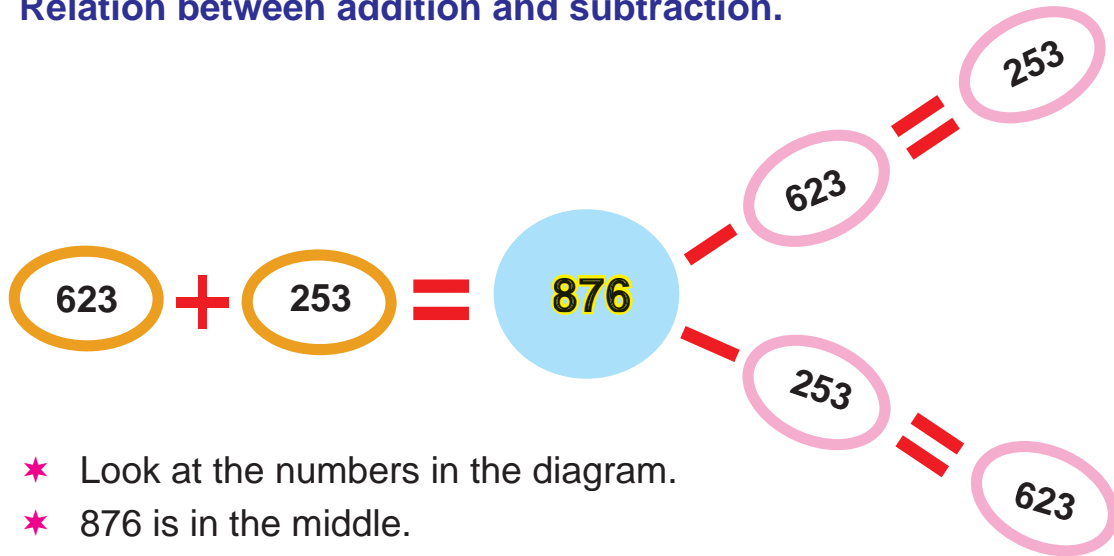
1) Fill up the addition chain



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.

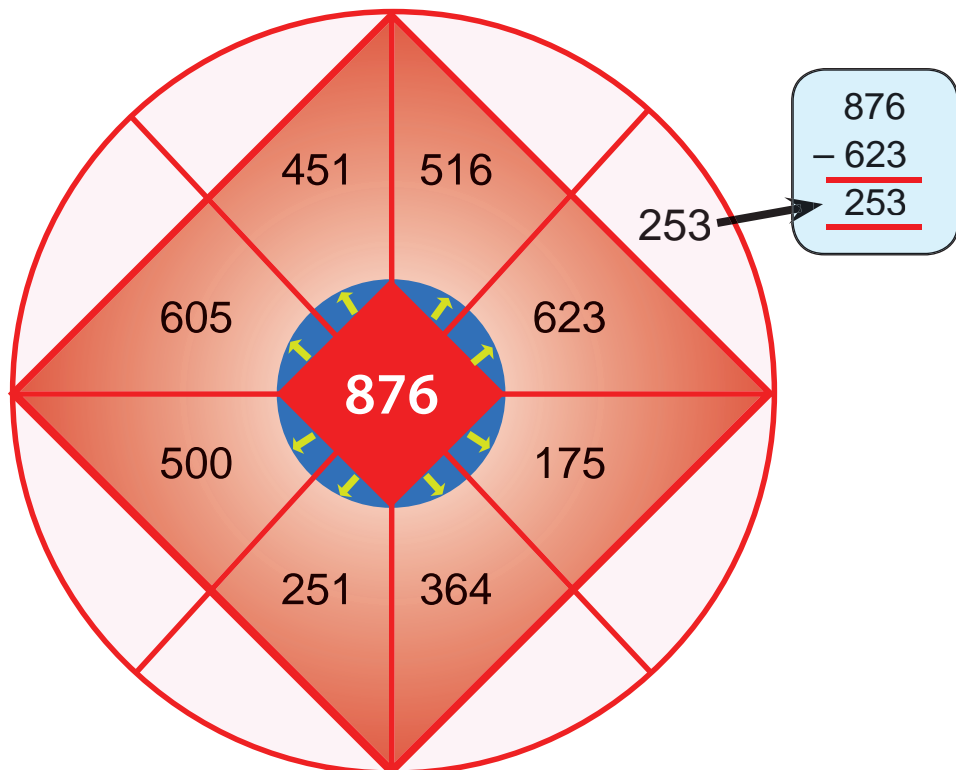
Subtraction

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

$$\begin{array}{r} 1) \quad 9865 \\ - 2334 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 7650 \\ - 2310 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 4030 \\ - 2010 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 4) \quad 8897 \\ - 3405 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad 8743 \\ - 1212 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad 7329 \\ - 2018 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 7) \quad 9000 \\ - 7000 \\ \hline \\ \hline \end{array}$$

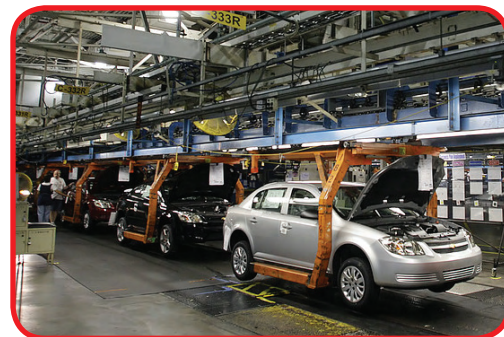
$$\begin{array}{r} 8) \quad 5678 \\ - 2400 \\ \hline \\ \hline \end{array}$$

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?



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
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
8	2	6	0
6	9	8	4
	7	6	

Step 2

Subtract the tens

8 cannot be subtracted from 5
Take 1 hundred from 2 hundreds,
(1 hundred = 10 tens) and adding with **5** tens
we get **15** tens – 8 tens = 7 tens

Th	H	T	O
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
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)

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

3)

Th	H	T	O
9	2	5	6
-	4	6	7

4)

Th	H	T	O
8	5	6	3
-	3	7	6

5)

Th	H	T	O
5	0	5	0
-	2	2	4

6)

Th	H	T	O
7	0	6	4
-	3	4	3

7)

Th	H	T	O
6	4	0	0
-	2	1	2

8)

Th	H	T	O
6	0	0	0
-	2	1	5

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?

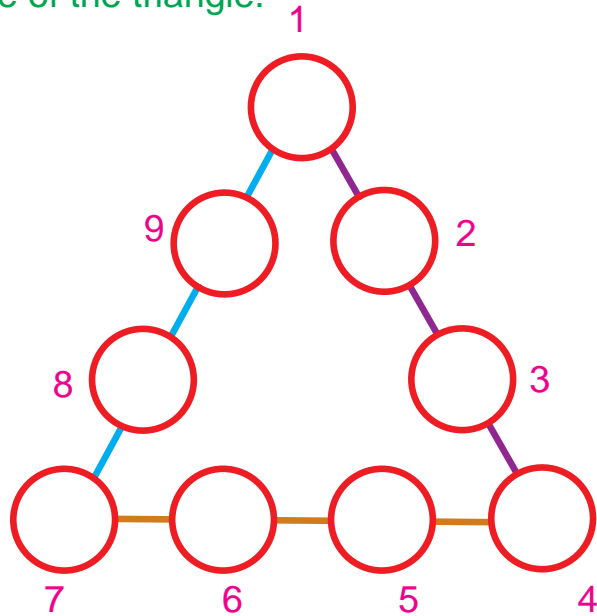
5) 30 laddus are issued from 100 laddus. How many laddus are remaining?

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

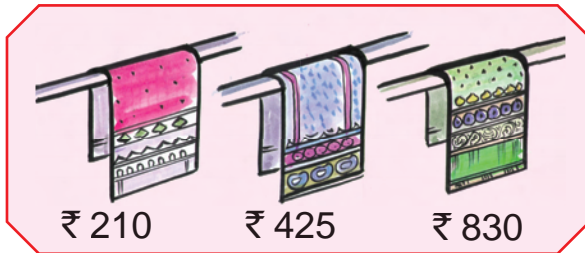
7) A jack fruit has 160 pods in it and another jack fruit has 100 pods. What is the total number of pods?

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.



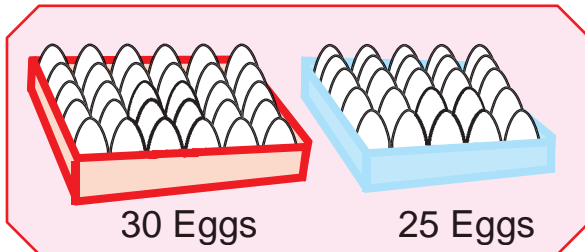
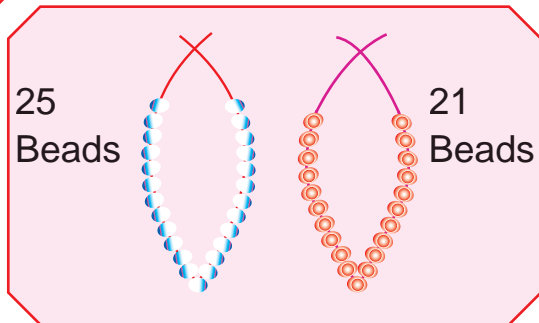
Observe the following pictures and frame the problems.



Problem

What is the total cost of 3 sarees?

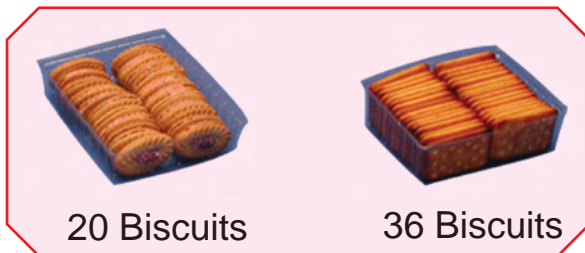
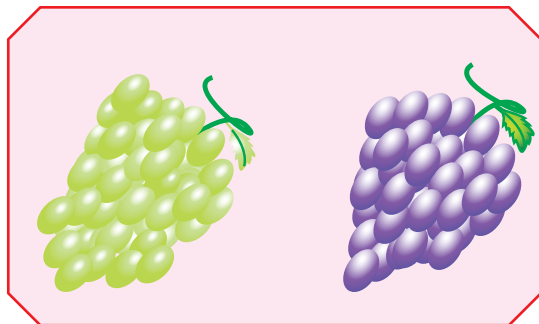
Problem



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 = $32 \text{ km} - 30 \text{ km}$

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
 $= 30 \text{ g} - 25 \text{ g}$
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

$$\begin{array}{r} 1) \quad 3462 \\ + 2524 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 2835 \\ + 4124 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 3654 \\ + 4303 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 4) \quad 1347 \\ + 6532 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad 2289 \\ + 7642 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad 3009 \\ + 4006 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 7) \quad 2010 \\ + 5297 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 8) \quad 1800 \\ + 3589 \\ \hline \\ \hline \end{array}$$

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?

$$\begin{array}{r} 11) \quad 8000 \\ - 3000 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 12) \quad 5900 \\ - 4700 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 13) \quad 6058 \\ - 2035 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 14) \quad 7090 \\ - 5040 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 15) \quad 6437 \\ - 2329 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 16) \quad 8942 \\ - 3424 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 17) \quad 7826 \\ - 3918 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 18) \quad 6243 \\ - 2462 \\ \hline \\ \hline \end{array}$$

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?

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.

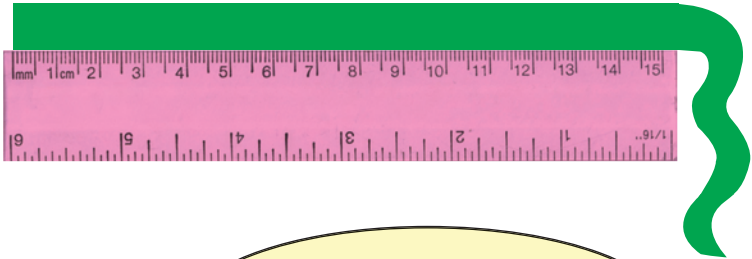
Measuring tools

Shall we measure with scale?



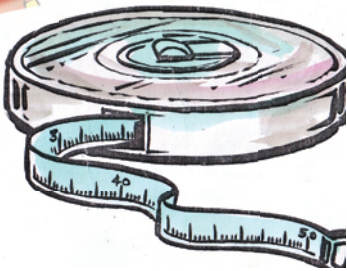
Pencil is 10 centimetre long.

Now can we measure ribbon by using tape?



Is there any other tools to measure?

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



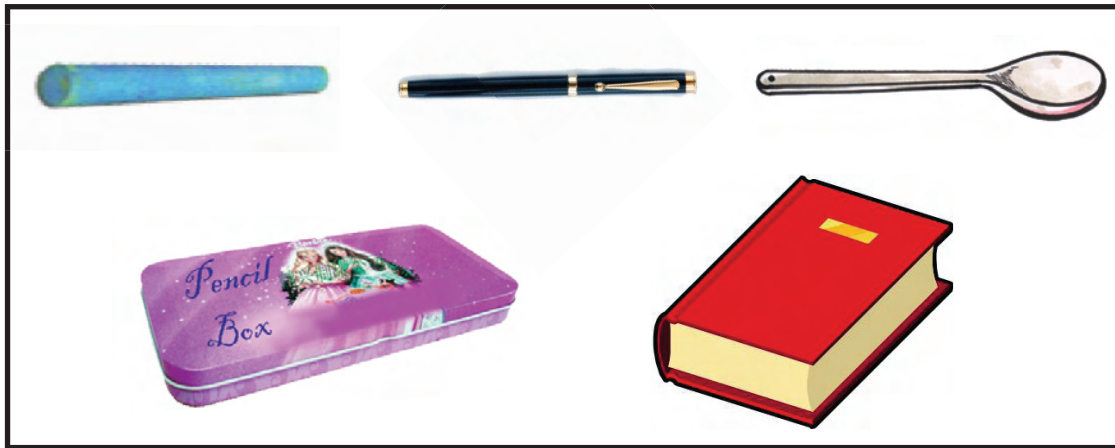
We can also use the tape to measure.

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 =
- 2) Length of a pen =
- 3) Length of a spoon =
- 4) Length of a box =
- 5) Length of a book =

You are 100 cm tall

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'.



Yes, my height is 1 metre.

Conversion of metre into centimetre

Convert 3 m into cm.

$$1 \text{ m} = 100 \text{ cm}$$

$$3 \text{ m} = 3 \times 100 \text{ cm}$$

$$3 \text{ m} = 300 \text{ cm}$$

Convert 15 m into cm.

$$1 \text{ m} = 100 \text{ cm}$$

$$15 \text{ m} = 15 \times 100 \text{ cm}$$

$$15 \text{ m} = 1500 \text{ cm}$$

Convert 6m 20cm into cm

$$1 \text{ m} = 100 \text{ cm}$$

step 1

$$6 \text{ m} = 6 \times 100 \text{ cm}$$

$$6 \text{ m} = 600 \text{ cm}$$

step 2

$$600 \text{ cm}$$

$$+ 20 \text{ cm}$$

$$620 \text{ cm}$$

$$6\text{m } 20\text{cm} = 620 \text{ cm}$$

To change m into cm, multiply by 100



Practice

1) $2 \text{ m} = \underline{200} \text{ cm}$

5) $3\text{m } 40\text{cm} = \underline{340} \text{ cm}$

2) $5 \text{ m} = \quad \text{cm}$

6) $7\text{m } 10\text{cm} = \underline{\quad} \text{ cm}$

3) $25 \text{ m} = \underline{2500} \text{ cm}$

7) $8\text{m } 7\text{cm} = \underline{807} \text{ cm}$

4) $48 \text{ m} = \underline{\quad} \text{ cm}$

8) $6\text{m } 5\text{cm} = \underline{\quad} \text{ cm}$

Conversion of centimetre into metre

Convert 500 cm into m

$$100\text{cm} = 1\text{m}$$

$$500 \div 100 = 5$$

$$500\text{cm} = 5\text{m}$$

Convert 725 cm into m

$$100\text{cm} = 1\text{m}$$

$$725\text{cm} = 700 \text{ cm} + 25 \text{ cm} = 7 \text{ m} + 25 \text{ cm}$$

$$725\text{cm} = 7\text{m } 25\text{cm}$$

To change cm into m, divide by 100





Practice

1) 200 cm = 2 m

2) 500 cm = m

3) 5700 cm = m

4) 4800 cm = m

5) 485 cm = 4 m 85 cm

6) 775 cm = m cm

7) 970 cm = m cm

8) 706 cm = 7 m 6 cm

Addition

12m 75cm + 58m 56cm

m	cm
12	75
+ 58	56
<hr/>	
71	31
<hr/>	

Step 1

Add cm

75
+ 56
<hr/>
131cm = 1m 31cm
<hr/>

Step 2

Add m

1
12
+ 58
<hr/>
71 m
<hr/>

12m 75cm + 58m 56cm = **71m 31cm**



Practice

Add

m	cm
92	19
+ 83	42
<hr/>	
<hr/>	

m	cm
22	65
+ 97	48
<hr/>	
<hr/>	

m	cm
25	60
+ 56	35
<hr/>	
<hr/>	

m	cm
43	08
+ 27	64
<hr/>	
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Life related problems

Reena bought 15m 85cm of red ribbon and 28m 50cm of green ribbon to decorate the hall. What is the total length of the ribbon.

	m	cm
Length of the red ribbon =	15	85
Length of the green ribbon =	+ 28	50
Total length of the ribbon =	44	35



Total length of the ribbon is 44m 35cm



Practice

Ashok sold 20m 95cm of cloth to one customer and 11m 35cm to another customer. Find the total length of the cloth.

Subtraction without conversion

$$95\text{m } 27\text{cm} - 46\text{m } 18\text{cm}$$

	m	cm
	95	27
-	46	18
	49	09

$$95\text{m } 27\text{cm} - 46\text{m } 18\text{cm} = 49\text{m } 9\text{cm}$$

Step 1

subtract cm

27	
-	18
9	

Step 2

subtract m

95	
-	46
49	



Practice

m	cm
94	84
-	44
49	72

m	cm
85	44
-	68
16	76

m	cm
95	75
-	57
38	18

m	cm
32	28
-	12
20	16

Subtraction with conversion

$$84\text{m } 85\text{cm} - 68\text{m } 96\text{cm}$$

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 84 \quad 85 \\ - 68 \quad 96 \\ \hline 15 \quad 89 \end{array}$$

96 cm cannot be subtracted from 85 cm. So take 1 m from 84 m.

Step 1

$$\begin{array}{r} \text{subtract cm} \\ 85 \quad 185 \\ - 96 \quad - 96 \\ \hline \quad \quad 89 \end{array}$$

Step 2

$$\begin{array}{r} \text{subtract m} \\ 83 \\ - 68 \\ \hline 15 \end{array}$$

$$84\text{m } 85\text{cm} - 68\text{m } 96\text{cm} = 15\text{m } 89\text{cm}$$



Practice

Subtraction

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 93 \quad 29 \\ - 32 \quad 65 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 85 \quad 21 \\ - 47 \quad 75 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 98 \quad 46 \\ - 78 \quad 89 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 56 \quad 18 \\ - 28 \quad 37 \\ \hline \end{array}$$

Life related problems

Dinesh bought 80m 50cm of wire to fence his garden. He used only 65m 75cm of wire. Find the remaining length of the wire.

$$\begin{array}{r} \text{m} \quad \text{cm} \\ \text{Total length of the wire} = 80 \quad 50 \\ \text{Length of the wire used} = - 65 \quad 75 \\ \hline = 14 \quad 75 \end{array}$$

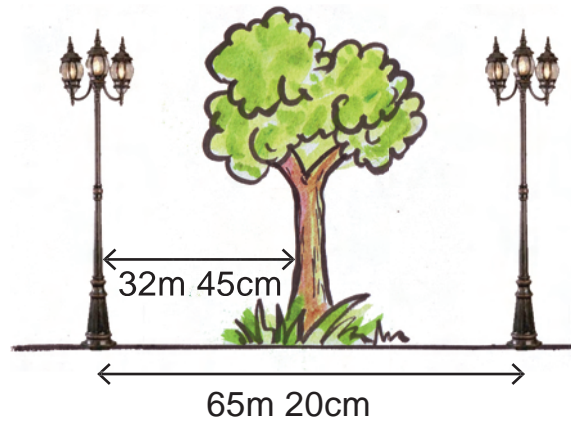


Remaining length of the wire is 14m 75cm



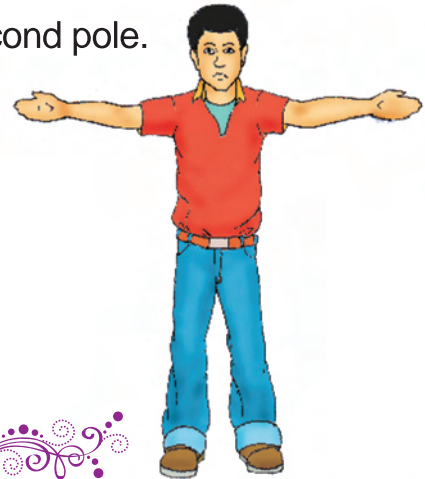
Practice

- 1) Kannan sold 48m 87cm of curtain cloth from the roll of 95m 75cm. How much is left over?



- 2) Distance between two poles is 65m 20cm. In between the poles there is a tree which is 32m 45cm away from the first pole. Find the distance between the tree and the second pole.

One metre is about the distance from one hand to other when your arms are stretched out



PROJECT

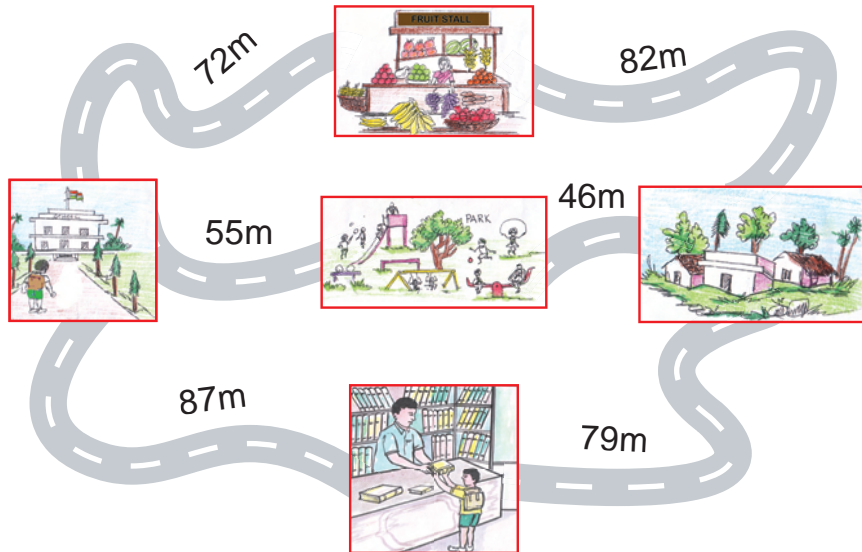
Estimate the following distances.



- 1) Distance between your classroom and the next classroom.
- 2) Distance between your classroom and play ground.
- 3) Distance between the two poles in a kho - kho ground.
- 4) Distance between two neighbouring trees in your school.

Lab activity

Look at the route map. The various distance are marked in the figure.



Vijay goes to school by walk. While going to school he buys notebooks from the bookstall.

- 1) Distance between Vijay's house and the bookstall is _____
- 2) From the bookstall he goes to the school. Distance between the bookstall and the school is _____
- 3) Total distance covered by him from his house to school is _____
- 4) After school he goes to the fruit stall and buys fruits, then he goes to his house. Distance covered from school to house is _____
- 5) After reaching home he goes to the park and comes back home. Total distance covered by him is _____
- 6) In case if he comes directly from school to his house through park, then the distance is _____

REVISION



Fill in the blanks

- 1) 1300 cm = _____ m
- 2) 5800 cm = _____ m
- 3) 563 cm = _____ m _____ cm
- 4) 1865 cm = _____ m _____ cm
- 5) 809 cm = _____ m _____ cm
- 6) 7m 25cm = _____ cm
- 7) 4m 60cm = _____ cm
- 8) 8m 15cm = _____ cm

Do the sums

1)	m	cm
	80	20
+	35	65

2)	m	cm
	77	77
+	38	60

3)	m	cm
	85	85
+	76	42

4)	m	cm
	62	80
-	35	65

5)	m	cm
	97	07
-	38	52

6)	m	cm
	35	55
-	22	68

- 7) Ravi purchased 1m 35cm shirt bit for him and and 1m 65cm shirt bit for his brother. Find the total length of the shirt bits.
- 8) An electrician had 63m 39cm of wire. He used 36m 48cm. How much length of wire was left with him?

WEIGHING OBJECTS

More weight

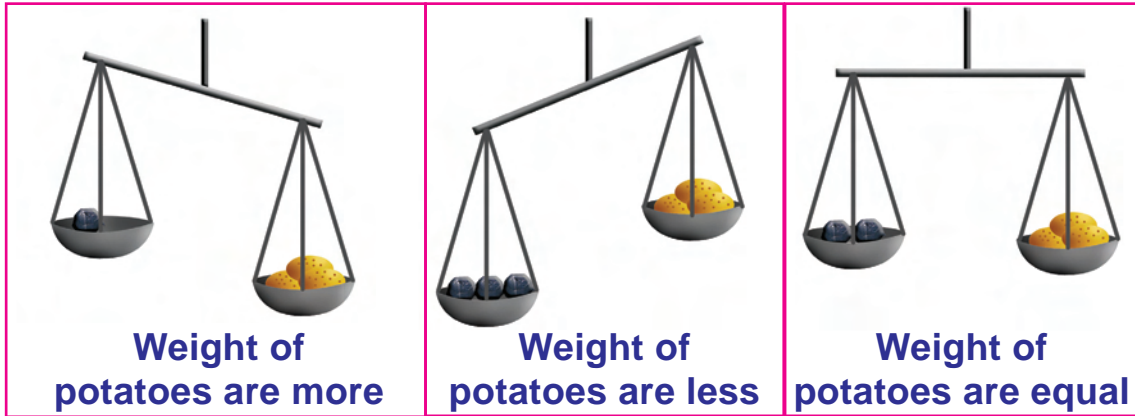


Iron ball

Less weight



Basket ball





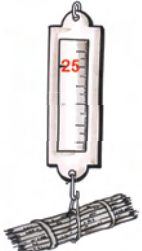


Kilogram can be written as 'kg'

Weighing stones and weight of objects in kilogram






Various weighing machines

	<p>Weight of tomatoes = <u>2</u> kg</p>
	<p>Weight of grapes = ___ kg</p>
	<p>My weight = ___ kg</p>
	<p>Weight of sugar = ___ kg</p>
	<p>Weight of firewood = ___ kg</p>

Collect the pictures of different types of weighing machines and use it to prepare an album.

Addition in kilogram




Raghu	Kumar	Anandhan	Weight of	
			Raghu	= 32 kg
			Kumar	= 30 kg
			Anandhan	= + 31 kg
				<u>93 kg</u>
32 kg	30 kg	31 kg		

Total weight of them is 93 kg






Practice

1) Find the total weight of vegetables

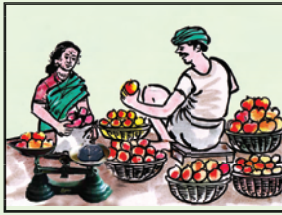
			Weight of	
			tomatoes	= 15 kg
			potatoes	= 10 kg
			onions	= + 7 kg
15 kg	10 kg	7 kg		<u> </u>
			Total weight of vegetables	= <u> </u>

2) Find the total weight of cereals.

	Green gram		Weight of	
Wheat		Black gram	wheat	= 10 kg
			green gram	= 75 kg
			black gram	= + 63 kg
10 kg	75kg	63kg		<u> </u>
			Total weight	= <u> </u>

3) Weight of rice 68 kg, sugar 55 kg and ragi 48 kg.
Find the total weight.

Subtraction in kilogram



Weight of mangoes in the shop = 25 kg
 Weight of mangoes sold = - 17 kg

 8 kg

Remaining weight of mangoes in the shop = 8 kg

Initial weight of Ice bar is 28 kg. After 15 minutes weight of Ice bar is 16 kg.



28 kg
 - 16 kg

 12 kg

Weight of melted Ice = 12 kg



Practice

1) Weight of
 Laddu = 28 kg
 Sold = -16 kg



2) Weight of
 Halwa = 43 kg
 Sold = - 18 kg

Remaining laddu = _____ kg

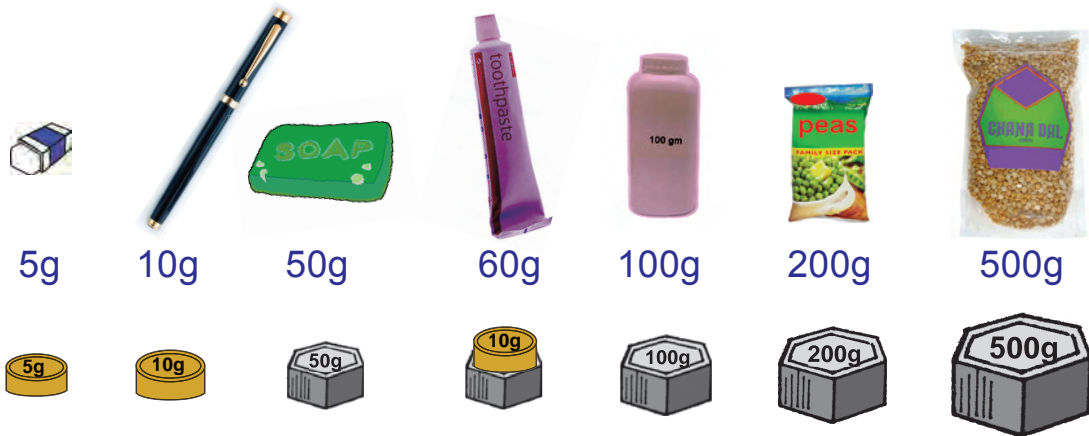
Remaining halwa = _____ kg

3) Weight of
 Clay = 25 kg
 Horses = -19 kg



Weight of unused clay = _____ kg

Weighing stones and weight of objects in gram



Tea powder, coffee powder, gold, pepper, etc., are measured by grams

gram can be written as 'g'

1 Kilogram = 1000 gram

$$\begin{array}{l}
 500\text{g} + 500\text{g} = 1000\text{g} \\
 200\text{g} + 200\text{g} + 200\text{g} + 200\text{g} + 200\text{g} = 1000\text{g} \\
 100\text{g} + 100\text{g} + 100\text{g} + 100\text{g} + 100\text{g} + 100\text{g} + 100\text{g} + 100\text{g} + 100\text{g} + 100\text{g} = 1000\text{g}
 \end{array}$$

Addition in gram

Let us find the total weight of the plums

$$\begin{array}{r}
 200\text{ g} \\
 500\text{ g} \\
 + 700\text{ g} \\
 \hline
 1400\text{ g}
 \end{array}$$

$$\begin{array}{l}
 1\text{ kg} = 1000\text{g} \\
 1400\text{ g} = 1000\text{ g} + 400\text{ g} \\
 = 1\text{ kg} + 400\text{ g} \\
 = 1\text{ kg } 400\text{ g}
 \end{array}$$

Total weight of plums = 1kg 400g



Practice

1) Find the total weight of grapes.

150 g
350 g
+ 850 g
<hr/>
<hr/>

Total weight of grapes = _____ g

2)
$$\begin{array}{r} 250 \text{ g} \\ 345 \text{ g} \\ + 657 \text{ g} \\ \hline \\ \hline \end{array}$$

3)
$$\begin{array}{r} 247 \text{ g} \\ 199 \text{ g} \\ + 238 \text{ g} \\ \hline \\ \hline \end{array}$$

4)
$$\begin{array}{r} 645 \text{ g} \\ 561 \text{ g} \\ + 359 \text{ g} \\ \hline \\ \hline \end{array}$$

5)
$$\begin{array}{r} 894 \text{ g} \\ 467 \text{ g} \\ + 500 \text{ g} \\ \hline \\ \hline \end{array}$$

Subtraction in gram

Let us calculate weight of mango.



Weight of yellow bag	=	1650 g
red bag	=	- 1350 g
		<hr/>
		300 g
		<hr/>

Weight of mango is 300 g



Practice

1)
$$\begin{array}{r} 756 \text{ g} \\ - 435 \text{ g} \\ \hline \\ \hline \end{array}$$

2)
$$\begin{array}{r} 539 \text{ g} \\ - 49 \text{ g} \\ \hline \\ \hline \end{array}$$

3)
$$\begin{array}{r} 465 \text{ g} \\ - 309 \text{ g} \\ \hline \\ \hline \end{array}$$

4)
$$\begin{array}{r} 647 \text{ g} \\ - 35 \text{ g} \\ \hline \\ \hline \end{array}$$

Addition in kilogram and gram

Find the total weight of the following things.

Things	Weight	
	kg	g
Television	20	500
Chair	5	350
Bicycle	30	100
Total	55	950

Steps

- Add the grams
- Add the kilograms

Total weight of things = **55 kg 950 g**



Practice

1) Find the total weight of papayas.



1kg 255g



2kg 350g



3kg 300g

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 1 \quad 255 \\
 2 \quad 350 \\
 + \quad 3 \quad 300 \\
 \hline
 \hline
 \end{array}$$

Total weight of papaya is _____ kg _____ g

2) Find the total weight of vegetables



17kg 250g



13kg 500g



25kg 105g

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 17 \quad 250 \\
 13 \quad 500 \\
 + \quad 25 \quad 105 \\
 \hline
 \hline
 \end{array}$$

Total weight of vegetables is _____ kg _____ g

3) kg g

77 355

89 090

+ 35 155

4) kg g

44 363

13 147

+ 15 289

5) kg g

88 154

16 246

+ 26 343

Subtraction in kilogram and gram

Let us find the weight of honey



5kg 950g



4kg 895g

Weight of bee hive	=	kg	g
		5	950
Weight of honey	=	-	4 895
		1	055

Weight of honey wax is **1kg 55g**



Practice

1)



13kg 750g



11kg 255g

Weight of		kg	g
purple paint	=	13	750
paint used	=	-	11 255

Remaining paint is _____ kg _____ g

2) Find the difference between the weight of oranges and jack fruit.



45kg 258g



18kg 163g

Weight of		kg	g
oranges	=	45	258
jack fruit	=	-	18 163

Difference in weight = _____ kg _____ g

3) kg g

25	456
-	14 369
<hr/>	
<hr/>	

4) kg g

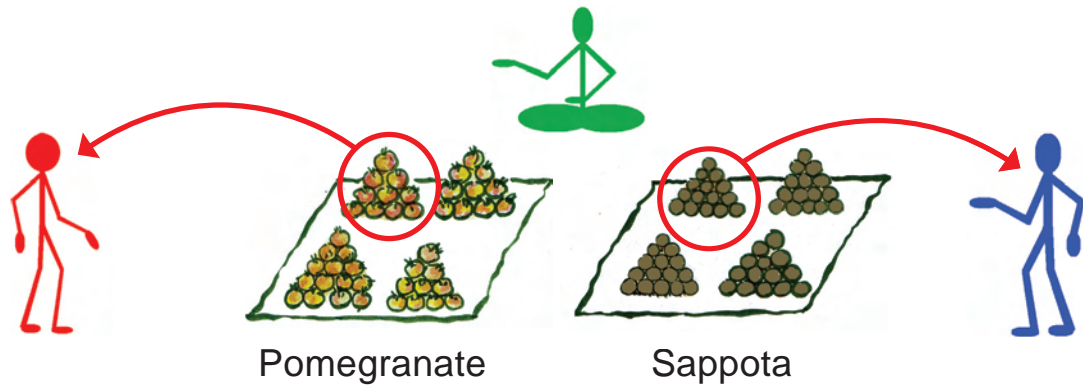
37	576
-	25 455
<hr/>	
<hr/>	

5) kg g

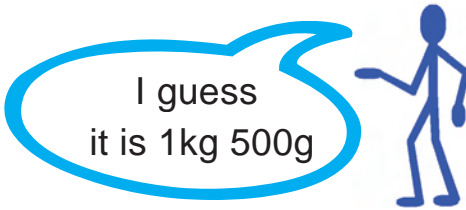
54	342
-	37 523
<hr/>	
<hr/>	

Guessing weight

Shall we check our guessing, by weighing !

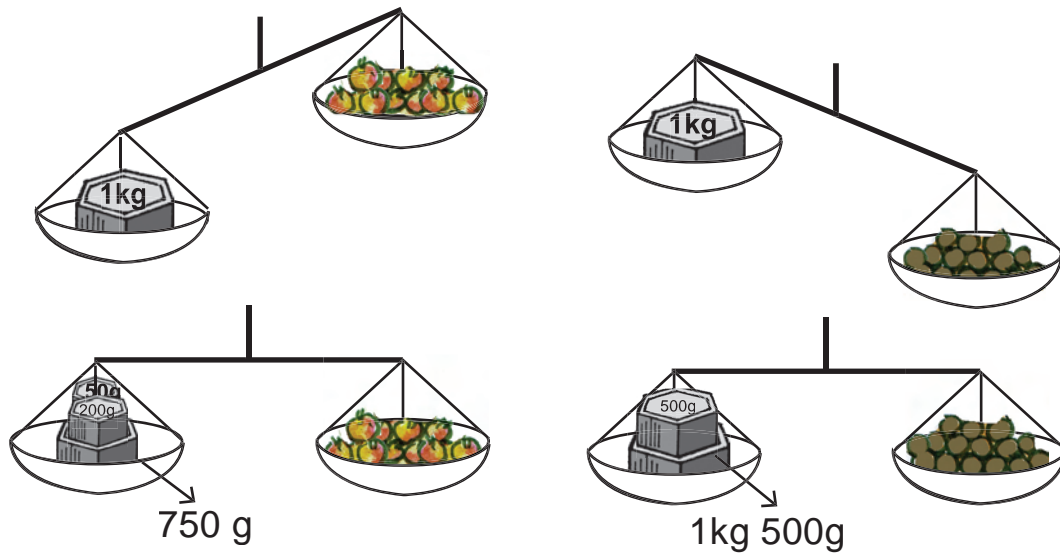


I guess
it is 1kg



I guess
it is 1kg 500g

Both are verifying their guessing.



My guessing is close
to the correct weight.

My guessing is correct.





Estimate the weight of objects.

Maths Book
Pencil eraser
Bucket
Crayon
School bag

200g
5g
130g
75g
150g



Practice

In a grocery shop the following items are purchased.

Name of the customer	Red chilli		Coriander		Turmeric		Cumin		Pepper	
	kg	g	kg	g	kg	g	kg	g	kg	g
Meena	2	175	4	150	300		150		125	
Radha		150	1	125	150		50		50	
Kumaresan	2	000	3	200	200		250		300	

Find the quantity of groceries bought by each customer.



Lab activity

Guess and verify the weights.

S. No.	Vegetables	Guessing weight	Correct weight
1.			
2.			
3.			
4.			
5.			

REVISION



Fill in the blanks.

- 1) $8500\text{g} = \underline{\hspace{1cm}} \text{kg} + \underline{\hspace{1cm}} \text{g}$
- 2) $7250\text{g} = \underline{\hspace{1cm}} \text{kg} + \underline{\hspace{1cm}} \text{g}$
- 3) $6\text{kg } 550\text{g} = \underline{\hspace{1cm}} \text{kg} + \underline{\hspace{1cm}} \text{g}$
- 4) $13\text{kg } 650\text{g} = \underline{\hspace{1cm}} \text{kg} + \underline{\hspace{1cm}} \text{g}$

Do the sums.

1)

kg	g
10	080
+ 20	355

2)

kg	g
29	054
+ 31	453

3)

kg	g
31	423
47	315
+ 54	154

4)

kg	g
75	859
- 39	676

5)

kg	g
91	759
- 77	597

6)

kg	g
82	235
- 17	198

- 7) One package of sweet is 5kg 600g and another package of sweet is 2kg 350g. Find the total weight.

- 8) The quantity of red chillies in two baskets are 25kg 550g and 10kg 350g respectively. Find the total weight of red chillies.
- 9) First bag contains 52kg 600g of wheat and second bag contains 35kg 250g of wheat. How much more weight of wheat contains in the first bag than second bag?
- 10) A sandalwood weighs 18kg 250g. A part of it weighing 12kg 100g is cut off from it. What is the weight of the remaining piece?