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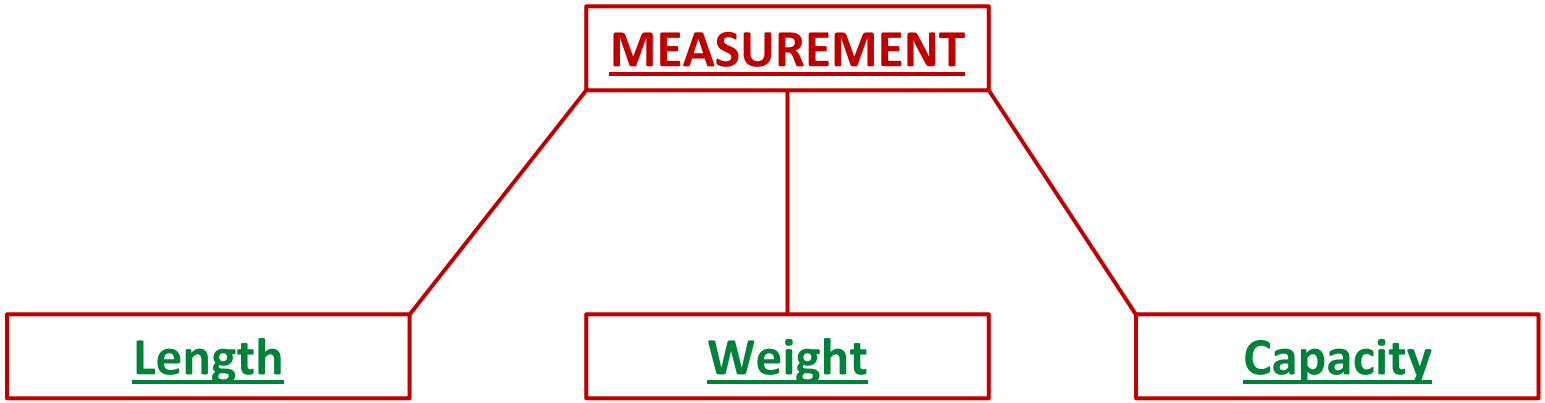
CLASS	**: IV**
SUBJECT	**: MATHEMATICS**
CHAPTER NUMBER	**: 12**
CHAPTER NAME	**: MEASUREMENT**
SUBTOPIC	**: LENGTH AND CONVERSION OF LENGTH**

MEASUREMENT



MEASUREMENT

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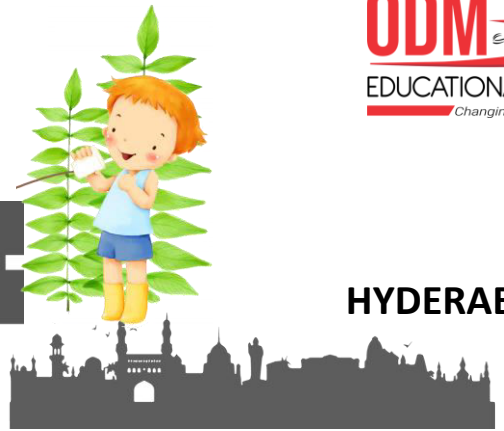
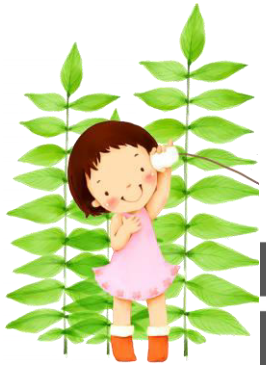


HYDERABAD



DELHI
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MEASUREMENT

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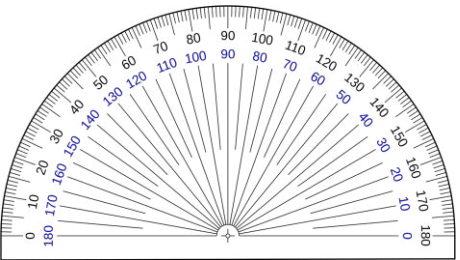
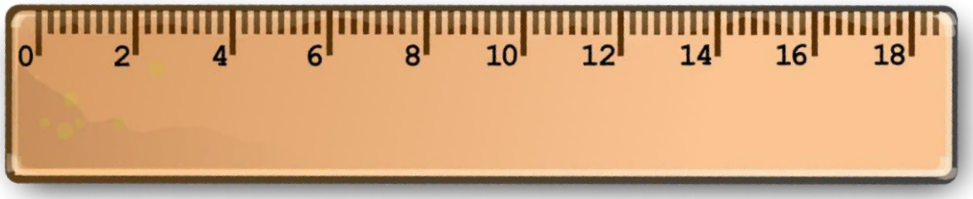
The standard unit used for measuring length is called the **metre (m)**. Other units used for measuring lengths are **millimetre**, **centimetre**, **kilometre**, etc.

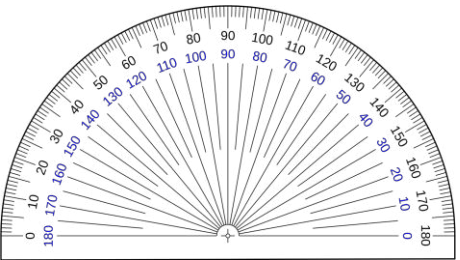


MEASUREMENT

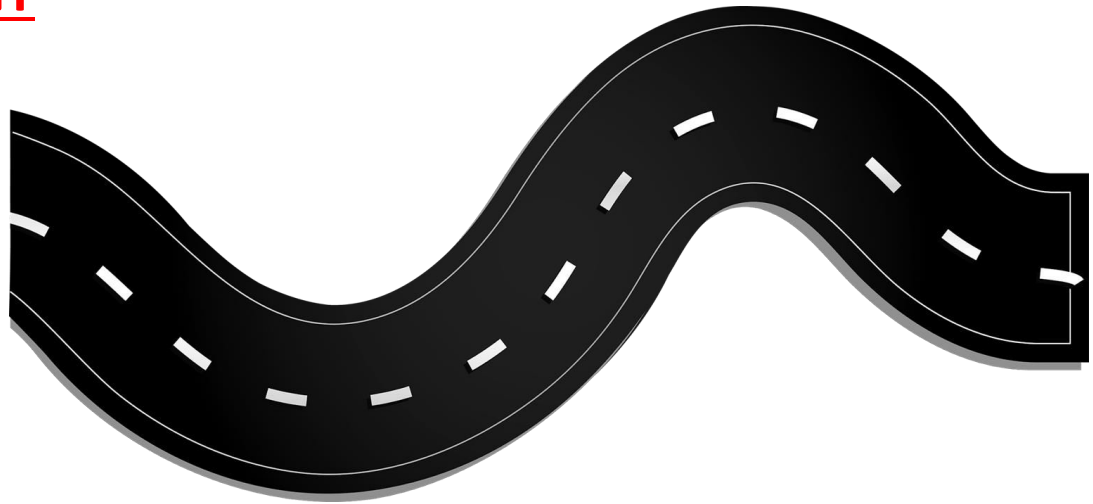


Centimetre

It is used for measurement of small length

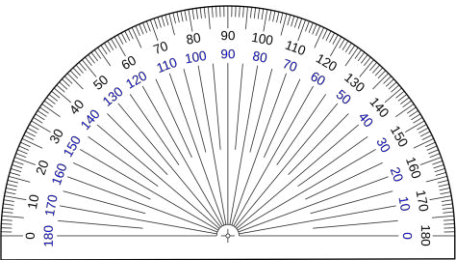


MEASUREMENT



Kilometre

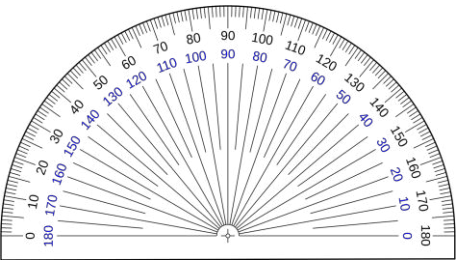
It is used for measurement of large length



MEASUREMENT

Metre

Here we use the unit metre for measurement



MEASUREMENT

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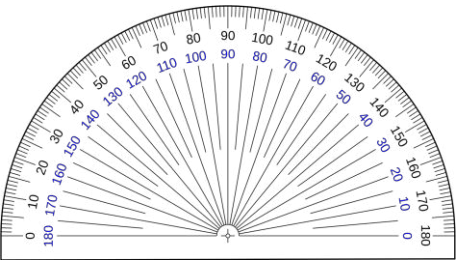
1 cm	=	10 mm
1 m	=	100 cm
1 km	=	1000 m



MEASUREMENT

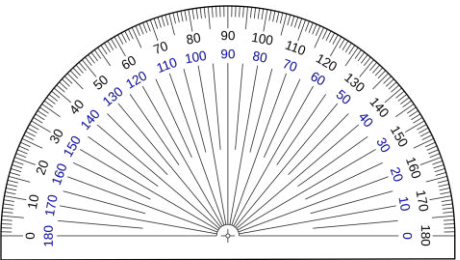
CONVERSION

A. Metres into Centimetre

1 m = 100 cm

1. To convert metres into centimetres, multiply the number of metres by 100. **(to multiply a number by 100, just put two zeroes to the right of the number)**.

2. To convert metres and centimetres into **centimetres**, multiply the number of
metres by **100** and then **add** the number of centimetres to it.



MEASUREMENT

CONVERSION

A. Metres into Centimetre

1 m = 100 cm

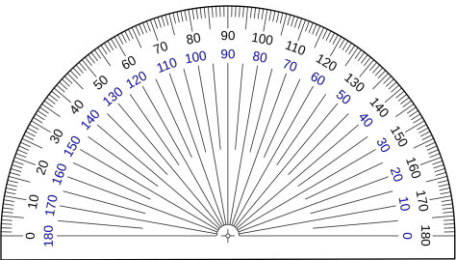
Example:

1. Convert 35 metres into centimetres.

35 × 100 = **3500 cm**.

2. Convert 225m 85cm into centimetres.

225m 85cm = **225 × 100 cm + 85 cm** = **22,585cm**



MEASUREMENT

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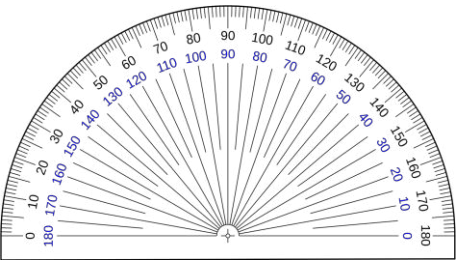
CONVERSION

B. Centimetres into metres 100 cm = 1 m

To convert centimetres into metres, divide the number of centimetres by 100.



MEASUREMENT

CONVERSION

B. Centimetres into metres **100 cm = 1 m**

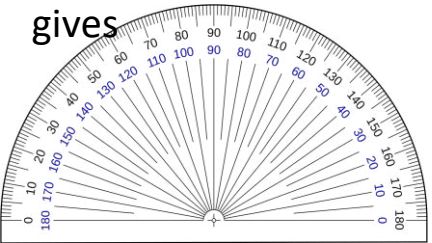
Example: 1. Convert 545 centimetres into metres.

545 cm = **500 cm + 45 cm =** **5 m 45 cm**

2. Convert 3,758cm into metres and centimetres.

3,758cm = **3700 cm + 58 cm** = **37 m 58 cm**

when centimetres are converted into metres and centimetres, the number formed by the last two digits on the right gives the number of centimetres and the number formed by the remaining digits gives the number of metre.



Thus, 3,7**67** cm = 37 m 67 cm.

33,7**42** cm = 337 m 42 cm

MEASUREMENT

CONVERSION

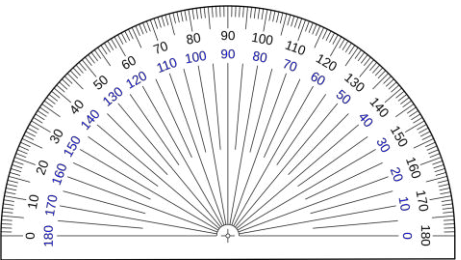
C. Kilometres into metres

1 km = 1,000 m

1. To convert kilometres into metres, multiply the number of kilometres by 1,000.

   (To multiply by 1,000, just insert 3 zeros to the right of the number).

2. To convert kilometres and metres into metres, multiply the number of kilometres b 1,000 and then add the number of metres, to it.



MEASUREMENT

CONVERSION

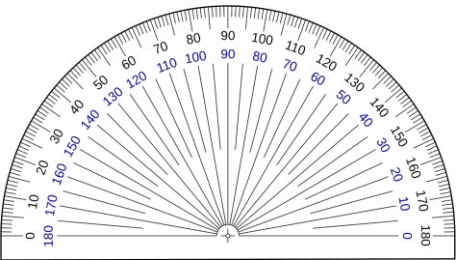
C. Kilometres into metres

1 km = 1,000 m

Example: Convert 9 km and 12 km 625 m into metres.

(a) **9 × 1000 m =** **9,000 m**

(b) 9 km = 12km, 625 m = **12 × 1,000 m + 625 m =** **12,000 + 625 =** **12,625 m**



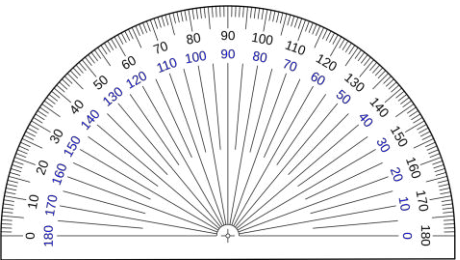
MEASUREMENT

CONVERSION

D. Metres into Kilometres

1000 m = 1 km

To convert metres into kilometres, divide the number of metres by 1,000.



MEASUREMENT

CONVERSION

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D. Metres into Kilometres

1000 m = 1 km

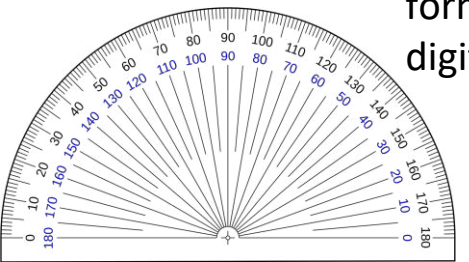
Example: 1. Convert 1,775 m into kilometres.

1,775 m = **1000 m + 775 m =** **1 km 775 m**

2. Convert 12,580 m into kilometres.

12,580 m = **12000 m + 580 m** = **12 km 580 m**

when metres are converted into kilometres and metres, the number formed by the last three digits on the right gives the metres and the remaining digit(s) gives the kilometres.



LEARNING OUTCOME:

Students are able to understand about the different units of length and to know about the conversion of length.

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CLASS	**: IV**
SUBJECT	**: MATHEMATICS**
CHAPTER NUMBER	**: 12**
CHAPTER NAME	**: MEASUREMENT**
SUBTOPIC	**: CONVERSION OF LENGTH, EX-12 A**

Website: www.odmegroup.org
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Sishu Vihar, Infocity Road, Patia, Bhubaneswar- 751024

MEASUREMENT

EXERCISE – 12(a)

1. Convert into centimetres.

(a) 105 m = **10,500 cm**

105 m = **105 × 100 cm** = **10500 cm**

(b) 4m 15cm = **415 cm**

4m 15cm = **4 × 100 cm + 15 cm** = **400 + 15 cm** = **415 cm**

MEASUREMENT

EXERCISE – 12(a)

1. Convert into centimetres.

(c) 212 m = **21,200 cm**

212 m = **212 × 100 cm** = **21200 cm**

(d) 18m 85cm = **1,885 cm**

18m 85cm = **18 × 100 cm + 85 cm = 1800 + 85 cm = 1,885 cm**

MEASUREMENT

EXERCISE – 12(a)

2. Convert into metres and centimetres.

(a) 384 cm = **3** m **84** cm

384 cm = **300 cm + 84 cm =** **3 m 84 cm**

(b) 12,715 cm = **127** m **15** cm

12,715 cm = **12700 cm + 15 cm =** **127 m 15 cm**

MEASUREMENT

EXERCISE – 12(a)

2. Convert into metres and centimetres.

(c) 24,367 cm = **243** m **67** cm

24,367 cm = **24300 cm + 67 cm =** **243 m 67 cm**

(d) 552 cm = **5** m **52** cm

552 cm = **500 cm + 52 cm =** **5 m 52 cm**

MEASUREMENT

EXERCISE – 12(a)

3. Convert into metres.

(a) 35 km = **35,000 m**

35 km = **35 × 1000 m** = **35,000 m**

(b) 2 km 375 m = **2,375 m**

2 km 375 m = **2 × 1000 m + 375 m =** **2,000 + 375 m =** **2,375 m**

MEASUREMENT

EXERCISE – 12(a)

3. Convert into metres.

(c) 9 km 450 m = **9,450 m**

9 km 450 m = **9 × 1000 m + 450 m** = **9,000 + 450 m** = **9,450 m**

(d) 78 km 044 m = **78,044 m**

78 km 044 m = **78 × 1000 m + 044 m** = **78,000 + 044 m** = **78,044 m**

MEASUREMENT

EXERCISE – 12(a)

4. Convert into kilometres and metres.

(a) 1,925 m = **1** km **925** m

1,925 m = **1,000 m + 925 m =** **1 km 925 m**

(b) 14,725 m = **14** km **725** m

14,725 m = **14,000 m + 725 m =** **14 km 725 m**

MEASUREMENT

EXERCISE – 12(a)

4. Convert into kilometres and metres.

(c) 3,1 25 m =

	3	km	**125**	m

3,125 m = **3000 m + 125 m =** **3 km 125 m**

(d) 25,528 m =

	25	km	**528**	m

25,528 m = **25,000 m + 528 m =** **25 km 528 m**

HOME ASSIGNMENT:

- **Complete Exercise – 12 A in your notebook.**

LEARNING OUTCOME:

Students are able to understand about the conversion of length.

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SESSION	**: 3**
CLASS	**: IV**
SUBJECT	**: MATHEMATICS**
CHAPTER NUMBER	**: 12**
CHAPTER NAME	**: MEASUREMENT**
SUBTOPIC	**: ADDITION AND SUBTRACTION OF LENGTHS, EX-12 B & C**

MEASUREMENT

ADDITION OF LENGTHS

EXAMPLE – 1 Add 15 m 5 cm and 24 m 95 cm.

	m	cm
	1	
	15	5
+	24	95
	40	00

Method

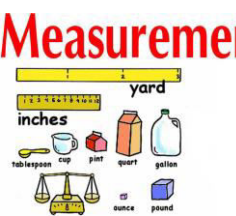
Step 1 :

Add the centimetres first. 5 + 95 = 100 cm = 1m. Write 00 under the centimetres' column and carry 1 to the metres' column.

Step 2 :

Add the metres. 15 + 24 + 1(carry over) = 40. Write 40 under the metres' column.

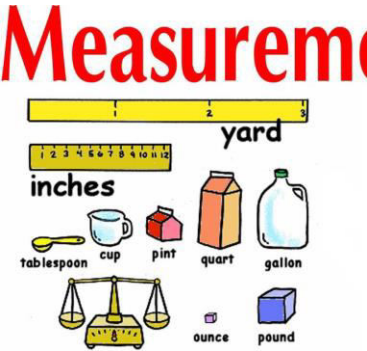
Ans : 40 m 00 cm



MEASUREMENT

ADDITION OF LENGTHS

we can add **metres** and **centimetres** like ordinary numbers but all **centimetres** must be written as **two digits** numbers like paise. For example, **6cm** should be written as **06cm**, and **8cm** as **08cm**, etc.



ADDITION OF LENGTHS

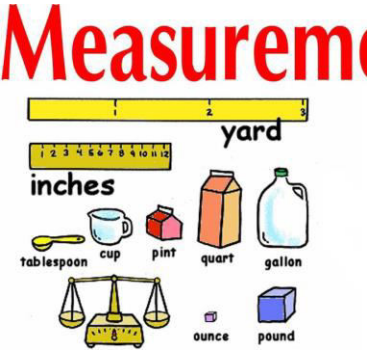
EXERCISE – 12(B)

A. Add the following.

1

		c	m
	1	1	
		8	
	7	5	
	1	2	
	6	5	
+		4	
	1	5	
	2	5	5 5

Ans. 25 m 55 cm



ADDITION OF LENGTHS

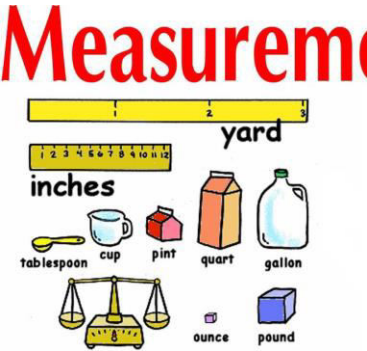
EXERCISE – 12(B)

A. Add the following.

2

	m	cm
	12	1
	15	5
	55	18
	60	
+	24	
	95	
	59	10

Ans. 59 m 10 cm



ADDITION OF LENGTHS

EXERCISE – 12(B)

B. **Word problems**.

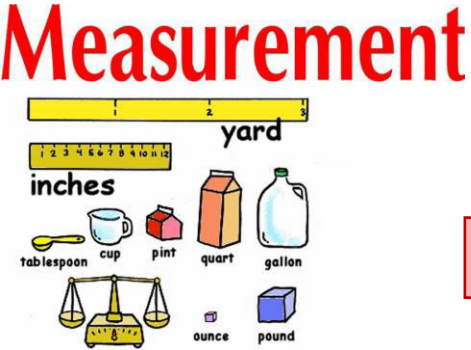
1. Suman cycled 6km 500m in one hour and 7km 750m in the next hour. How much distance did she cycle altogether?

Suman cycled total in one hour = 6km 500m

Suman cycled total in next hour = 7km 750m

Suman cycled total =

	km	m
	6	500
+	7	750
	14	250



Hence, She cycled total distance **14 km 250 m** altogether.

MEASUREMENT

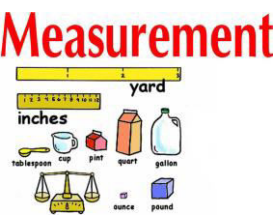
SUBTRACTION OF LENGTHS

EXAMPLE – 1 Subtract 9 m 57 cm from 15 m 26 cm.

m	cm
15	26
- 9	57
5 m	69cm

Or

m	cm
14	126
9	
5 m	69cm



MEASUREMENT

SUBTRACTION OF LENGTHS

EXAMPLE – 1 Subtract 9 m 57 cm from 15 m 26 cm.

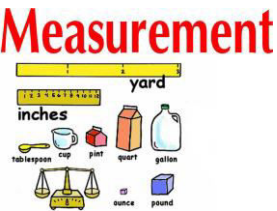
Method

Step 1 :

Subtract the centimetres.
As 57>26, we cannot subtract 57 from 26. so, borrow 1m from 15m. 1m = 100 cm.
100cm + 26cm = 126cm. Subtract 57cm from 126cm.
126 – 57 = 69cm. Write 69 in the centimetres' column.

Step 2 :

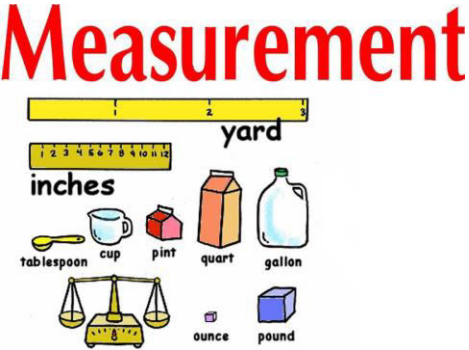
Subtract the metres.
Subtract 9m from 14m = 14m – 9m = 5m.
Write 5 in the metres' column. Ans : 5m 69cm



MEASUREMENT

SUBTRACTION OF LENGTHS

Centimetres should be written as two digit numbers.



SUBTRACTION OF LENGTHS

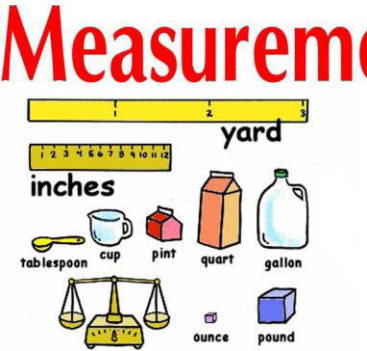
EXERCISE – 12(C)

A. Subtract the following.

1

	m	cm
	5	12
	8	~~/~~ ~~/~~
	6	2
-		4
	4	8

Ans. 4 m 14 cm



ADDITION OF LENGTHS

EXERCISE – 12(C)

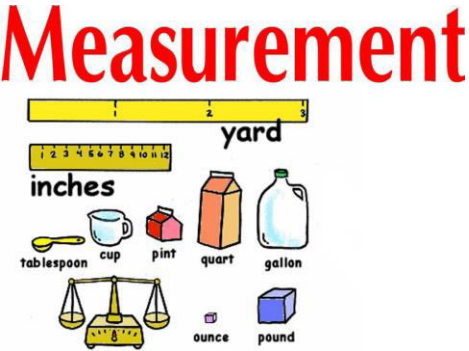
A. Subtract the following.

2

	m	cm
	3	18
	1	7
	4	8
-	1	2
	2	9

5 m 19 cm

Ans. 5 m 19 cm



SUBTRACTION OF LENGTHS

EXERCISE – 12(C)

B. **Word problems**.

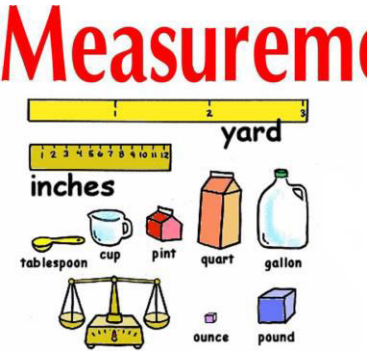
1. Sudhir is 163cm tall and Rupam is 1m 81cm tall. What is the difference between their heights?

Sudhir heights = 163 cm or 1m 63cm

Rupam heights = 1m 81cm

The difference between their heights =

	m	cm
	7	11
	1	
	8	1
-	1	
	6	3
	0	18



Hence,The difference between their heights is **18 cm**.

SUBTRACTION OF LENGTHS

EXERCISE – 12(C)

B. **Word problems**.

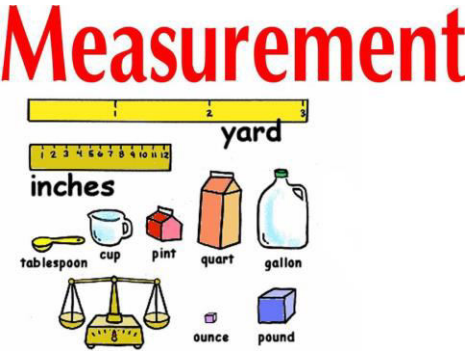
2. A pipe of length 5m is cut into two pieces. Of the length of one piece is 2m 65cm, what will be the length of the other piece?

Total length of the pipe = 5m 00cm.

The length of one pipe = 2m 65cm.

The length of another pipe =

m	cm
4	9 10
5	
0	0
- 2	
6	5
2	3 5



Hence, 2 m 35 cm is the length of other pipe.

HOME ASSIGNMENT:

- **Complete Exercise – 12 B & C in your note book.**

LEARNING OUTCOME:

Students are able to understand how to add and subtract the lengths.

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CLASS	**: IV**
SUBJECT	**: MATHEMATICS**
CHAPTER NUMBER	**: 12**
CHAPTER NAME	**: MEASUREMENT**
SUBTOPIC	**: WEIGHT AND CONVERSION OF WEIGHT, KILOGRAMS INTO GRAMS, EX-12 D**

ADDITION OF LENGTHS

EXERCISE – 12(B)

B. **Word problems**.

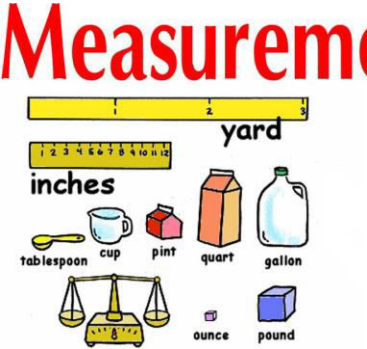
2. A wire of length 2m 35cm is joined with another wire of length 7m 95cm. What will be the total length of the wire?

The length of a wire = 2m 35cm

Length of another wire = 7m 95cm

Total length of wire =

	m	cm
	1	1
	2	
	3	5
+		7
	9	5
	10	30



Hence, The total length of the wire will be **10m 30cm**.

SUBTRACTION OF LENGTHS

EXERCISE – 12(C)

B. **Word problems**.

3. Rajesh's house is 10km 250m from school and Vinod's house is 3km 875m from school. Whose house is nearer to the school and by how much?

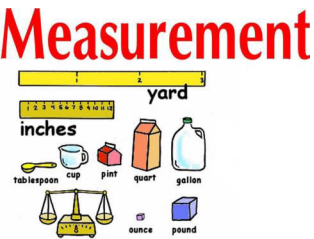
The total length of school from Rajesh's house = 10km 250m.

The total length of school from Vinod's house = 3km 875m.

Total difference of length of two friends school from house =

km	m
9	11 14 10
~~10~~	~~/~~ ~~/~~ ~~/~~
2 5 0	
- 3	
8 7 5	
6	3 7 5

Thus, Vinod's house is nearer to the school from Rajesh's from **6km 375m**.



WEIGHT

*We measure the weight of objects in **grams** and **kilograms**. For example, we weigh ourselves in **kilograms**, we buy rice, wheat, fruit, etc. In **kilograms**, while smaller quantities, light objects or precious objects such as gold, silver, medicines etc. are weighed in **grams**.*

1 kilogram = 1,000 grams

The short form of gram is ‘g’ and of kilogram is ‘kg’.

WEIGHT

CONVERSION

EXAMPLE : Convert 1 kg, 5 kg, 6 kg 250 g and 8 kg 750 g to grams.

(a) 1 kg = 1 × 1,000g = **1,000g**

(b) 5 kg = 5 × 1,000g = **5,000g**

(c) 6kg 250g = 6 × 1,000g + 250g = 6,000g + 250g = **6,250g**

(d) 8kg 750g = 8 × 1,000g + 750g = 8,000g + 750g = **8,750g**

WEIGHT

EXERCISE – 12(D)

Convert into grams..

(1) 2,000 = g

$2 \times 1{,}000g = 2{,}000g$

(2) 14 kg 438g = g

$14 \times 1{,}000g + 438g = 14{,}000g + 438g = 14{,}438g$

(3) 4,000 = g

$4 \times 1{,}000g = 4{,}000g$

WEIGHT

EXERCISE – 12(D)

Convert into grams..

(4) 24 kg 175 g = ____ g

24 × 1,000g + 175g = 24,000g + 175g = **24,175g**

(5) 10 kg = ____ g

10 × 1,000g = **10,000g**

(6) 42 kg 264 g = ____ g

42 × 1,000g + 264g = 42,000g + 264g = **42,264g**

WEIGHT

EXERCISE – 12(D)

Convert into grams..

(7) 71 kg 020g = g

71 × 1,000g + 020g = 71,000g + 020g = **71,020g**

(8) 64 kg 108g = g

64 × 1,000g + 108g = 64,000g + 108g = **64,108g**

(9) 58 kg 078g = g

58 × 1,000g + 078g = 58,000g + 078g = **58,078g**

(10) 80 kg 009g = g

80 × 1,000g + 009g = 80,000g + 009g = **80,009g**

LEARNING OUTCOME:

Students are able to understand the different units of weight and how to do the conversion of weight.

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CLASS	**: IV**
SUBJECT	**: MATHEMATICS**
CHAPTER NUMBER	**: 12**
CHAPTER NAME	**: MEASUREMENT**
SUBTOPIC	**: CONVERSION OF WEIGHT, GRAMS INTO KILOGRAMS, EX-12 E**

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MEASUREMENT

GRAMS INTO KILOGRAMS

To convert grams into kilograms, we divide the number of grams by 1000.

GRAMS INTO KILOGRAMS

EXAMPLE : - Convert the following into kilograms.

(a) 1,000g = 1000 ÷ 1000 = **1 kg**

(b) 7,000g = 7000 ÷ 1000 = **7 kg**

(c) 3,245g = 3000g + 245g = **3 kg 245 g**

(d) 24,728g = 24000g + 728g = **24 kg 728 g**

WEIGHT

GRAMS INTO KILOGRAMS

When grams are converted into **kilograms** and **grams**, the number formed by the last three digits on the right gives the number of **grams** , and the number formed by the remaining **digit**(s) gives the number of **kilograms**.

GRAMS INTO KILOGRAMS

EXERCISE – 12(E)

Convert into kilograms and grams.

(1) 3,000g = 3,0 00g = **3** kg **00** g

3,000g = **3000 ÷ 1000 =** **3 kg**

(2) 48,000g = **48** kg **00** g

48,000g = **48000 ÷ 1000 =** **48 kg**

GRAMS INTO KILOGRAMS

EXERCISE – 12(E)

Convert into kilograms and grams.

(3) 1,250g = 1,2 50g = | 1 | kg | 250 | g

1,250g = **1000g + 250g =** **1kg 250g**

(4) 2,765g = | 2 | kg | 765 | g

2,765g = **2000g + 765g =** **2kg 765g**

GRAMS INTO KILOGRAMS

EXERCISE – 12(E)

Convert into kilograms and grams.

(5) 3,105g = | 3 | kg | 105 | g

3,105g = **3000g + 105g =** **3kg 105g**

(6) 27,650g = | 27 | kg | 650 | g

27,650g = **27000g + 650g =** **27kg 650g**

GRAMS INTO KILOGRAMS

EXERCISE – 12(E)

Convert into kilograms and grams.

(7) 44,600g = | 44 | kg | 600 | g

44,600g = **44000g + 600g =** **44kg 600g**

(8) 38,842g = | 38 | kg | 842 | g

38,842g = **38000g + 842g =** **38kg 842g**

GRAMS INTO KILOGRAMS

EXERCISE – 12(E)

Convert into kilograms and grams.

(9) 66,085g = | 66 | kg | 085 | g

66,085g = **66000g + 085g =** **66kg 085g**

(10) 35,005g = | 35 | kg | 005 | g

35,005g = **35000g + 005g =** **35kg 005g**

LEARNING OUTCOME:

Students are able to understand how to convert the weight grams to kilograms.

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CLASS	**: IV**
SUBJECT	**: MATHEMATICS**
CHAPTER NUMBER	**: 12**
CHAPTER NAME	**: MEASUREMENT**
SUBTOPIC	**: ADDITION AND SUBTRACTION OF WEIGHT, EX-12 F & G**

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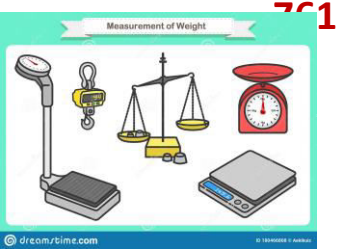
MEASUREMENT

ADDITION OF WEIGHTS

EXAMPLE – 1 Add 128 kg 75 g and 244 kg 686 g.

	kg	g
	1	11
	128	75
+	244	686
	372	

761



Method

Step 1 :

Add the grams first.
75 + 686 = 761. write 761g under the grams' column.

Step 2 :

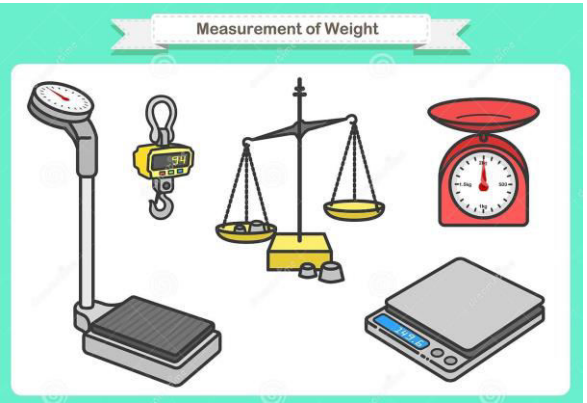
Add the kilograms.
128 + 244 = 372. write 372kg under kilograms' column.
Ans : 372kg 761g

MEASUREMENT

ADDITION OF WEIGHTS

Grams should be written as a 3-digit number.

e.g., 38g should be written as 038g and 9g as 009g etc.



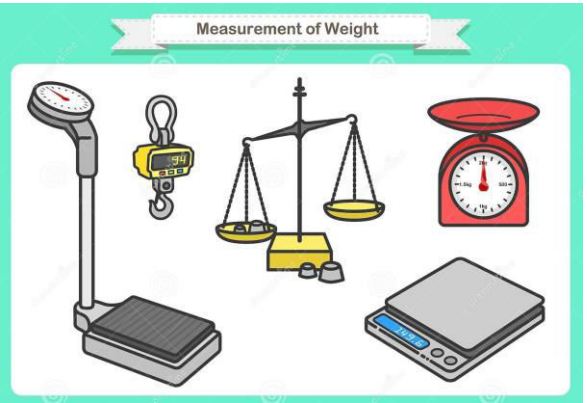
ADDITION OF WEIGHT

EXERCISE – 12(F)

A. Add the following.

	1	kg	
		g	
	1		
		8	
	1	2	4
+		7	
	3	2	4
	1 5		4 4 8

Ans. 15 kg 448 g



ADDITION OF WEIGHT

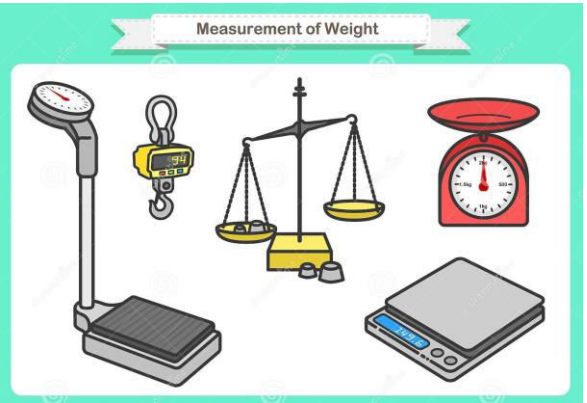
EXERCISE – 12(F)

A. Add the following.

2

	kg	g
	1	2
	2	1 4
+	1	7
	3	2 5

2 9 5 3 9



Ans. 29 kg 539 g

ADDITION OF WEIGHT

EXERCISE – 12(F)

B. **Word problems**.

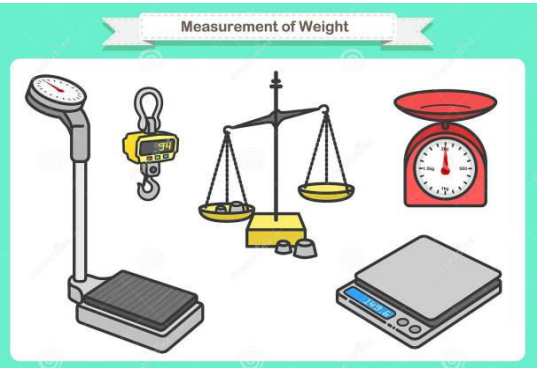
1. A man bought 30kg 500g rice from one shop and 48kg 755g rice from another shop. How much rice did he buy altogether?

The man bought rice from one shop = 30kg 500g

The man also bought rice from another shop = 48kg 755g

he total bought =

	kg	g
		1
	30	
	500	
+	48	
	755	
	79	255

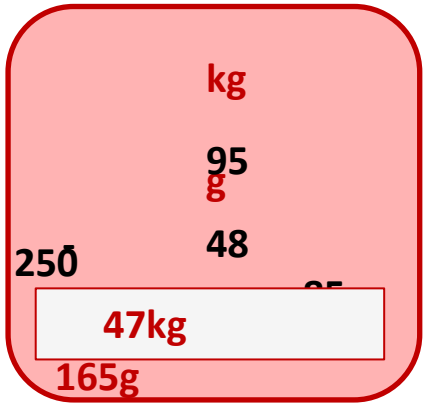


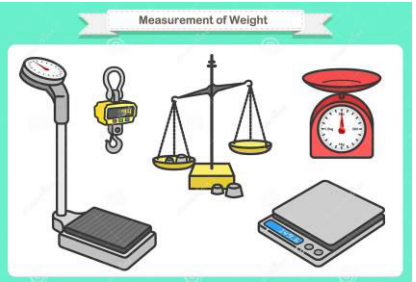
Hence, 79kg 255g of rice he bought altogether.

MEASUREMENT

SUBTRACTION OF WEIGHTS

EXAMPLE – 1 Subtract 48 kg 85g from 95 kg 250 g.





Method

Step 1 :

Subtract the grams first.
250 – 85 = 165 g.
Write 165 under grams' column.

Step 2 :

Subtract the kilograms.
95 – 48 = 47 kg. write 47 under kilograms' column.
Ans : 47 kg 165 g.

SUBTRACTION OF WEIGHT

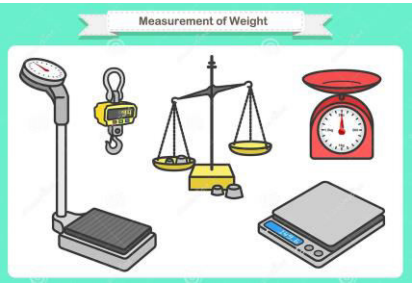
EXERCISE – 12(G)

A. Subtract the following.

1

	kg	g
	8	11 7 13
	~~8~~	~~9~~
	1	8 3
-	5	5
	3	7 8

33 kg 805 g



Ans. 33kg 805g

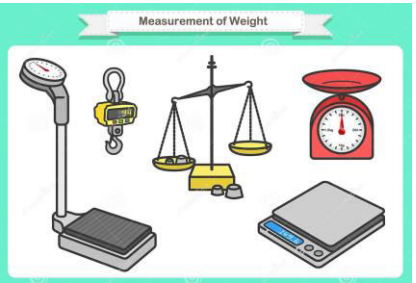
SUBTRACTION OF WEIGHT

EXERCISE – 12(G)

A. Subtract the following.

2

	kg	g
	8 10	11 13 13
	~~	9 1 ~~~
		2 4 3
-		4 8
		4 6 7
	4 2	7 7 6



Ans. 42kg 776g

SUBTRACTION OF WEIGHT

EXERCISE – 12(G)

B. **Word problems**.

1. By how much 123kg 160g is less than 208 kg 048g?

one weight is = 208kg 048g

another weight is = 123kg 160g.

The difference between their weight =

kg g

1 10 7 9 14

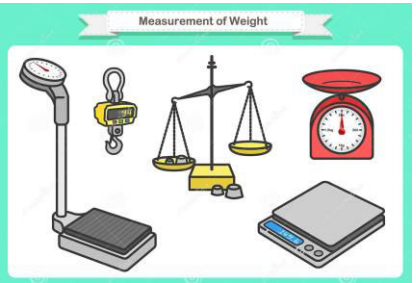
~~2~~ 0 ~~8~~ 0

4 8

\- 1 2 3 1

6 0

0 8 4 8 8 8



Therefore, The difference between their weight is **84kg 888g**.

SUBTRACTION OF WEIGHT

EXERCISE – 12(G)

B. **Word problems**.

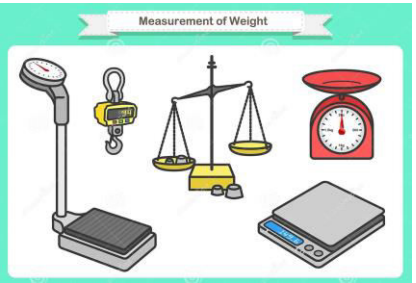
2. What should be added to 74kg 245g to get 86kg 418g?

One weight is = 86kg 418g

another weight is = 74kg 245g.

The difference between their weight =

kg	g
	3 11
8 ~~6~~	4
1 8	
-	
7 4	2
4 5	
1 2	1 7 3



Thus, The difference between their weight is **12kg 173g**.

HOME ASSIGNMENT:

- **Complete Exercise – 12 F & G in your note book.**

LEARNING OUTCOME:

Students are able to understand how to add and subtract the weight.

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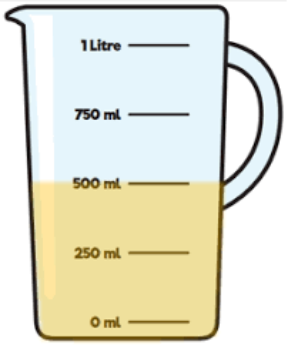
SUBJECT	**: MATHEMATICS**
CHAPTER NUMBER	**: 12**
CHAPTER NAME	**: MEASUREMENT**
SUBTOPIC	**: CAPACITY AND CONVERSION OF CAPACITY, EX-12 H**

CAPACITY

*We measure capacity in **litres** and **millilitres**. **Litre** is the standard unit of capacity. Liquids like milk, water, petrol, etc., are measured in **litres**. Smaller quantities like medicinal liquids such as cough syrup, tonics, etc., are measured in **millilitres**.*

1 litre = 1,000 millilitres



'L' or 'l' is the short form of litres and 'mL' or 'ml' is the short form of millilitre.

CAPACITY

Just as we have standard weights, we have vessels (containers) with standard capacities too.

These vessels are generally used for measuring milk.

These vessels are generally used for measuring oil.

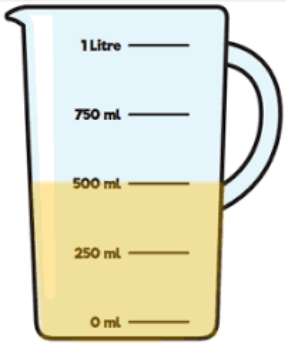
Chemists and druggists measure medicinal liquids with small graduated cylinders of capacities 1m**l** to 100 m**l**.

CAPACITY

CONVERSION

Litres into millilitres (litres x 1000)

To convert litres into millilitres, multiply the quantity by 1000.



CAPACITY

CONVERSION

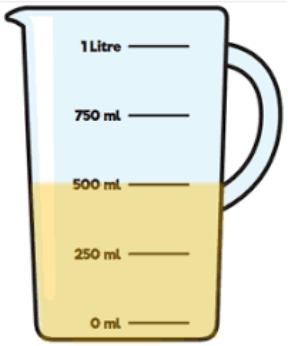
EXAMPLE : Convert the following into millilitres.

(a) 5 litres = 5 × 1,000ml = **5,000 ml**

(b) 7 litres = 7 × 1,000ml = **7,000 ml**

(c) 3l 175ml = 3 × 1,000ml + 175ml = 3,000ml + 175ml = **3,175 ml**

(d) 6l 224ml = 6 × 1,000ml + 224ml = 6,000ml + 224ml = **6,224 ml**

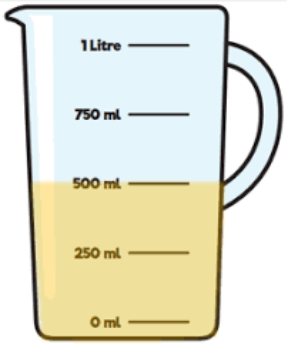


CAPACITY

CONVERSION

Millilitres into litres (millilitres ÷ 1000)

To convert millilitres into litres, divide the quantity by 1000.



CAPACITY

CONVERSION

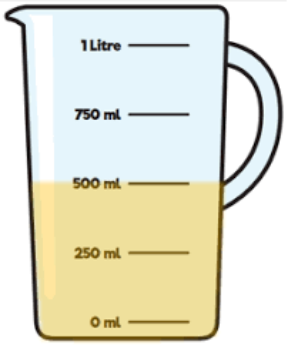
EXAMPLE : Convert the following into litres and millilitres.

(a) 2,000 ml = 2000 ÷ 1,000 = **2 l**

(b) 4,000 ml = 4000 ÷ 1,000 = **4 l**

(c) 8,000 ml = 8000 ÷ 1,000 = **8 l**

(d) 6,025 ml = 6,000 ÷ 1,000 ml + 025 ml = **6 l 025 ml**

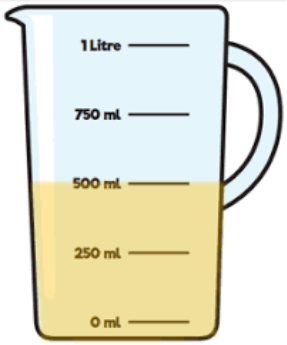


CAPACITY

CONVERSION

Millilitres into litres (millilitres ÷ 1000)

When converting millilitre into litre, the last three digits on the right gives the millilitre, remaining digits give the litre.



9352 ml = 9 l 352 ml

13450 ml = 13 l 450 ml

CAPACITY

EXERCISE – 12(H)

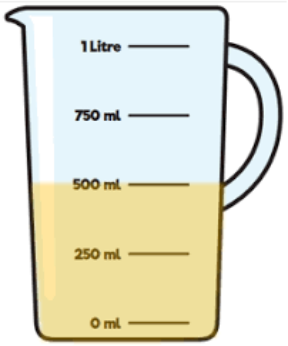
A. Convert into millilitres.

(1) 3 l = **3,000** ml

3 × 1,000ml = **3,000** ml

(2) 4 l 125m l = **4,125** ml

4 × 1,000 ml + 125 ml = 4,000 ml + 125 ml = **4,125** ml



(3) 6 l = **6,000** ml

6 × 1,000 ml = **6,000ml**

(4) 5 l 225 ml = **5,225** ml

5 × 1,000 ml + 225 ml = 5,000 ml + 225 ml = **5,225** ml

CAPACITY

EXERCISE – 12(H)

B. Convert into litres.

(1) 3,000 ml = **3** l **000** ml

3,000 ml = **3000 ÷ 1000 =** **3 l**

(2) 6,666 ml = **6** l **666** ml

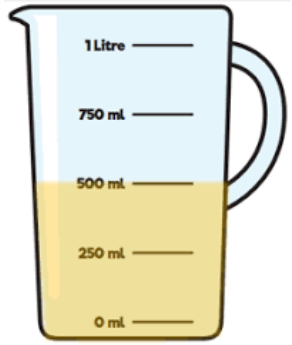
6,666 ml = **6000 + 666 ml =** **6 l 666 ml**

(3) 9,000 ml = **9** l **000** ml

9,000 ml = **9000 ÷ 1000 =** **9 l**

(4) 6,808 ml = **6** l **808** ml

6,808 ml = **6000 + 808 ml =** **6 l 808 ml**



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HOME ASSIGNMENT:

- **Complete Exercise – 12 H in your note book.**

LEARNING OUTCOME:

Students are able to understand about the different units of capacity and also about the conversion of capacities.

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CLASS	**: IV**
SUBJECT	**: MATHEMATICS**
CHAPTER NUMBER	**: 12**
CHAPTER NAME	**: MEASUREMENT**
SUBTOPIC	**: ADDITION AND SUBTRACTION OF CAPACITIES, EX-12 I & EX-12 J**

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CAPACITY

ADDITION OF CAPACITIES

Addition of capacity measures is carried out in the same way as in mass measures.

Millilitres should be written as a 3-digit number.

CAPACITY

ADDITION OF CAPACITIES

EXAMPLE Add 6 l 225 ml and 4 l 383 ml.

	l	ml
		1
	6	225
+	4	383
	10	
	608	

Method

Step 1 :

Add the millilitres first.
225 + 383 = 608 ml.
Write 408 under millilitres' column.

Step 2 :

Add the litres.
6 + 4 = 10 l.
Write 10 under the litres' column.
Ans : 10 l 408 ml

ADDITION OF CAPACITIES

EXERCISE – 12(I)

A. Add the following.

1

	l	ml
	1	1
	2	6
	1	3 9
+	8	1
	9	4 7

1 0 8 0 8 6

Ans. 108 l 086 ml

ADDITION OF CAPACITIES

EXERCISE – 12(I)

A. Add the following.

2

	l	ml
	1	
	1 2 3	5
+	1 0	
	2 9	
	3 2 9	
	1 5 2	8 3 9

Ans. 152 l 839 ml

ADDITION OF CAPACITIES

EXERCISE – 12(I)

B. **Word problems**.

1. 31 l 500 ml of milk in one can is mixed with 72 l 650 ml of milk in the other can. Find the total quantity of milk.

One can have total milk = 31 l 500 ml

The milk mixed in the other can = 72 l 650 ml

the total quantity of milk =

	l	ml
	1	
	3 1	5 0 0
+	7 2	6 5 0
	1 0 4	1 5 0

Therefore, The total quantity of milk is **104l 150ml**.

CAPACITY

SUBTRACTION OF CAPACITIES

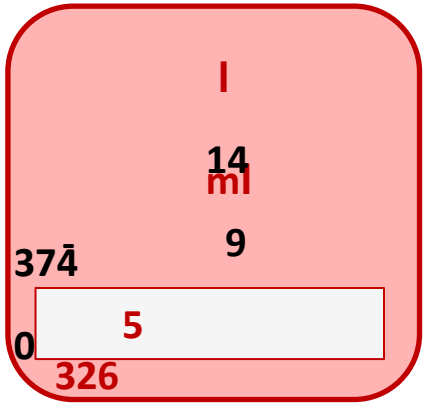
Subtraction of capacity measures is also carried out in the same way as in mass measures.

Millilitres should be written as a 3-digit number.

CAPACITY

SUBTRACTION OF CAPACITIES

EXAMPLE Subtract 9 l 48 ml from 14 l 374 ml.



Method

Step 1 :

Subtract the millilitres first.
374 – 048 = 326 ml.
Write 326 under millilitres' column.

Step 2 :

Subtract the litres.
14 – 9 = 5 litres. write 5 under litres' column.
Ans : 5 l 326 ml.

SUBTRACTION OF CAPACITIES

EXERCISE – 12(J)

A. Subtract the following.

1

	l	ml
	10	12 16
	1	7 ~~~
	1	3 6
-	1	2
	3	8 8

0 4 7 4 8

Ans. 4l 748ml

SUBTRACTION OF CAPACITIES

EXERCISE – 12(J)

A. Subtract the following.

2

	l	ml
	7 10	9 10
	8 1	
	0 0	8
-	3	5
	6 2	4

4 5 3 8 4

Ans. **45l 384ml**

SUBTRACTION OF CAPACITIES

EXERCISE – 12(J)

B. **Word problems.**

1. By how much is 66 l 30 ml greater than 36 l 575 ml?

one capacity is = 66 l 30 ml

Another capacity is = 36 l 575 ml.

The difference between their capacity =

l	ml
5 15	9 12 10
~~6~~	~~6~~ ~~0~~
3	0
-	
3	6 5
7	5
2	9 4 5 5

Thus, 66 l 30 ml is greater than from 36 l 575 ml by 29 l 455 ml.

SUBTRACTION OF CAPACITIES

EXERCISE – 12(J)

B. **Word problems.**

2. By how much is 152 l 460 ml less than 180 l 45 ml?

one capacity is = 180 l 45 ml

Another capacity is = 152 l 460 ml.

The difference between their capacity =

	l	ml
	7 9	9 14
	~~1~~ ~~8~~ ~~0~~	0
4 5		
-	1 5 2	4
6 0		
	0 2 7	5 8 5

Hence, 152 l 460 ml is less than from 180 l 45 ml by 27 l 585 ml.

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HOME ASSIGNMENT:

- **Complete Exercise – 12 I and 12 J in your note book.**

LEARNING OUTCOME:

Students are able to understand about the addition and subtraction of capacities.

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CLASS	**: IV**
SUBJECT	**: MATHEMATICS**
CHAPTER NUMBER	**: 12**
CHAPTER NAME	**: MEASUREMENT**
SUBTOPIC	**: DOUBT CLEARING AND CLASS TEST**

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CLASS TEST

FULL MARK - 15

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A. Fill in the blanks. **(1×5=5)**

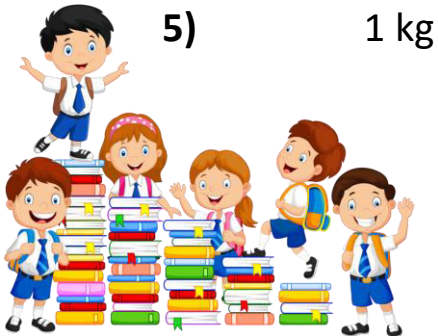
1) The standard unit of length is _____.

2) Tonics, syrups should be measured in _____ unit.

3) _____ is the highest unit of weight.

4) 1 m = _____cm.

5) 1 kg = _____g.



CLASS TEST

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B. Do as Directed. **(2×2=4)**

6) (i) Convert 68kg 098g into g.

(ii) Convert 5667 ml into l and ml.

7) Add the following.

6km 45m + 14km 67m + 31km 123m

CLASS TEST

FULL MARK - 15

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C. Solve the following questions. (3×2=6)

8) Rahul is 173cm tall and Rohan is 1m 91cm tall. What is the difference in between their heights?

9) A woman bought 31kg 400g wheat from one shop and 45kg 565g wheat in another shop. How much wheat did she buy altogether?

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ANSWER

CLASS TEST

FULL MARK - 15

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A. Fill in the blanks. (1×5=5)

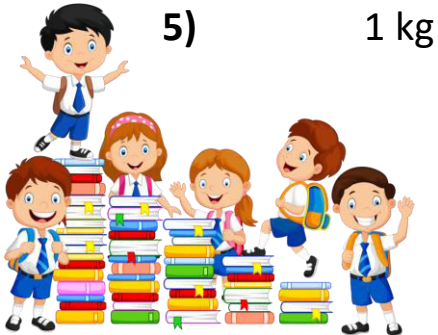
1) The standard unit of length is Metre.

2) Tonics, syrups should be measured in millilitre unit.

3) Kilogram is the highest unit of weight.

4) 1 m = 100 cm.

5) 1 kg = 1000 g.



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B. Do as Directed. **(2×2=4)**

6) (i) Convert 68kg 098g into g.

68kg 098g = 68 × 1,000g + 098g = 68,000g + 098g = **68,098g**

(ii) Convert 5667 ml into l and ml.

5,667 ml = 5,000 ml + 667 ml = 5,000l + 667l = **5 l 667 ml**

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B. Do as Directed. **(2×2=4)**

7) Add the following.

6km 45m + 14km 67m + 31km 123m

	km	m
	1	1 1
	6	
	0 4	5
	1 4	
	0 6	7
+	3 1	
	1 2	3
	5 1	2 3 5

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C. Solve the following questions. (3×2=6)

8) Rahul is 173cm tall and Rohan is 1m 91cm tall. What is the difference in between their heights?

Rahul's heights = 173 cm or 1m 73cm

Rohan's heights = 1m 91cm

The difference between their heights =

	m	c	m
			8 11
	1		⁄ ⁄
	9	1	
-	1		
	7	3	
	0	1	8

Hence, the difference in between their heights is **18 cm**.

CLASS TEST

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C. Solve the following questions. **(3×2=6)**

9) A woman bought 31kg 400g wheat from one shop and 45kg 565g wheat in another shop. How much wheat did he buy altogether?

A woman bought wheat from one shop = 31kg 400g

The woman also bought wheat from another shop = 45kg 565

Total amount of wheat bought by the woman =

	kg	g
	31	400
+	45	565
	76	965

Thus, total **76kg 965g** of wheat she bought altogether.

LEARNING OUTCOME:

Students are able to recall the whole chapter through this class test.

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THANKING YOU

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