1D Geometry and Length - Lesson 1

Length Conversions

LI

- Know units of length.
- Change different units of length.

SC

- x, ÷ whole numbers and decimals by 10, 100 and 1 000.

Mar 2-09:51

Literacy Links :

The word 'metre' comes from the Greek word 'metreo' (to measure, count or compare)

In the UK, the metric system (using the number 10) is used

The prefix 'milli-' comes from the Latin word 'mille' (one thousand)

The prefix 'centi-' comes from the Latin word 'centum' (hundred)

The prefix 'kilo-' comes from the Greek word 'chilioi' (thousand)

Changing mm to cm (and vice versa)

10 mm = 1 cm

mm ⇄ cm (÷ 10 / x 10)

Examples (mm to cm)

1) 27 mm =

2 . 7 cm

2) 315 mm =

31 . 5 cm

3) 8 mm =

0 . 8 cm

Examples (cm to mm)

4) 9 . 2 cm =

92 mm

5) 5 cm 6 mm =

50 mm + 6 mm = 56 mm

6) 0 . 4 cm =

4 mm

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1) Change these to mm :

a	6 cm	b	2 cm	c	15 cm	d	half a centimetre
e	4 cm 2 mm	f	8 cm 7 mm	g	12 cm 9 mm	h	5 cm 5 mm
i	1·5 cm	j	9·2 cm	k	18·9 cm	l	21·3 cm ?

2) Change these to cm :

a	40 mm	b	70 mm	c	90 mm	d	130 mm
e	35 mm	f	49 mm	g	200 mm	h	700 mm
i	650 mm	j	2000 mm	k	3 mm	l	7 mm ?

Feb 26-09:03

1) Change these to mm :

a	6 cm 60 mm	b	2 cm 20 mm	c	15 cm 150 mm	d	half a centimetre 5 mm
e	4 cm 2 mm 42 mm	f	8 cm 7 mm 87 mm	g	12 cm 9 mm 129 mm	h	5 cm 5 mm 55 mm
i	1·5 cm 15 mm	j	9·2 cm 92 mm	k	18·9 cm 189 mm	l	21·3 cm ? 213 mm

2) Change these to cm :

a	40 mm 4 cm	b	70 mm 7 cm	c	90 mm 9 cm	d	130 mm 13 cm
e	35 mm 3 . 5 cm	f	49 mm 4 . 9 cm	g	200 mm 20 cm	h	700 mm 70 cm
i	650 mm 65 cm	j	2000 mm 200 cm	k	3 mm 0 . 3 cm	l	7 mm ? 0 . 7 cm

Changing cm to m (and vice versa)

100 cm = 1 m

cm ⇄ m (÷ 100 / x 100)

Examples (m to cm)

7) 4 m =

400 cm

8) 3 . 2 m =

320 cm

9) 0 . 54 m =

54 cm

Examples (cm to m)

10) 600 cm =

6 m

11) 371 cm =

3 . 71 m

12) 7 cm =

0 . 07 m

3) Change these to cm :

a 3 m	b 9 m	c 14 m	d half a metre
e 25 m	f 49 m	g 200 m	h quarter of a metre
i 4 m 50 cm	j 7·05 m	k 0·5 m	l 0·01 m ?

4) Change these to m :

a 400 cm	b 700 cm	c 1500 cm	d 4000 cm
e 440 cm	f 950 cm	g 50 cm	h 25 cm ?

Feb 26-09:03

3) Change these to cm :

a	3 m 300 cm	b	9 m 900 cm	c	14 m 1 400 cm	d	half a metre 50 cm
e	25 m 2 500 cm	f	49 m 4 900 cm	g	200 m 20 000 cm	h	quarter of a metre 25 cm
i	4 m 50 cm 450 cm	j	7·05 m 705 cm	k	0·5 m 50 cm	l	0·01 m ? 1 cm

4) Change these to m :

a	400 cm 4 m	b	700 cm 7 m	c	1500 cm 15 m	d	4000 cm 40 m
e	440 cm 4 . 4 m	f	950 cm 9 . 5 m	g	50 cm 0 . 5 m	h	25 cm ? 0 . 25 m

Changing m to km (and vice versa)

1 000 m = 1 km

m ⇄ km (÷ 1 000 / x 1 000)

Examples (km to m)

13) 8 km =

8 000 m

14) 5 km 345 m =

5 345 m

15) 0 . 93 km =

930 m

Examples (m to km)

16) 13 000 m =

13 km

17) 7 032 m =

7 . 032 km

18) 29 m =

0 . 029 km

5) Change these to m :

a	3 km	b	12 km	c	25 km	d	half a kilometre
e	$5\frac{1}{2}$ km	f	2 km 750 m	g	9 km 800 m	h	1 km 70 m
i	5·2 km	j	12·6 km	k	2·25 km	l	0·8 km.

6) Change these to km :

a	5000 m	b	18 000 m	c	300 m	d	7500 m
e	18 400 m	f	4250 m	g	2150 m	h	6950 m
i	350 m	j	780 m	k	12 400 m	l	300 000 m.

Feb 26-09:03

5) Change these to m :

a	3 km (3 000 m)	b	12 km (12 000 m)	c	25 km (25 000 m)	d	half a kilometre (500 m)
e	$5\frac{1}{2}$ km (5 500 m)	f	2 km 750 m (2 750 m)	g	9 km 800 m (9 800 m)	h	1 km 70 m (1 070 m)
i	5·2 km (5 200 m)	j	12·6 km (12 600 m)	k	2·25 km (2 250 m)	l	0·8 km. (800 m)

6) Change these to km :

a	5000 m (5 km)	b	18 000 m (18 km)	c	300 m (0 . 3 km)	d	7500 m (7 . 5 km)
e	18 400 m (18 . 4 km)	f	4250 m (4 . 25 km)	g	2150 m (2 . 15 km)	h	6950 m (6 . 95 km)
i	350 m (0 . 35 km)	j	780 m (0 . 78 km)	k	12 400 m (12 . 4 km)	l	300 000 m. (300 km)

R E C A P

mm and cm	cm and m	m and km

m ⇄ km (x 1 000 / ÷ 1 000)

1 000 m = 1 km

m ⇄ km (÷ 1 000 / x 1 000)

10 mm = 1 cm

1 000 km = 1 km

mm ⇄ cm (x 10 / ÷ 10)

100 m = 1 cm

mm ⇄ cm (÷ 10 / x 10)

cm ⇄ m (x 100 / ÷ 100)

10 cm = 1 mm

cm ⇄ m (÷ 100 / x 100)

100 cm = 1 m

Jan 6-10:14

H O M E W O R K

1) Put these four lengths in order, **smallest** first :-

6 cm 5 mm 6·2 cm 63 mm 6 cm

2) Put these four lengths in order, **largest** first :-

8 m 90 cm 8·8 m 870 cm 9 m

Jan 6-09:59

H O M E W O R K

1) Put these four lengths in order, **smallest** first :-

6 cm 5 mm 6·2 cm 63 mm 6 cm

6 cm, 6 . 2 cm, 63 mm, 6 cm 5 mm

2) Put these four lengths in order, **largest** first :-

8 m 90 cm 8·8 m 870 cm 9 m

9 m, 8 m 90 cm, 8 . 8 m, 870 cm

Jan 6-09:59

H O M E W O R K

(open-ended)

Use the internet to find other units of length and where they are used.

Jan 6-09:59