



We are moving on to look at shape area, volume and perimeter in this learning pack. In the class newsletter I put some information about multiplying and dividing by the power of 10 (10, 100, 1000) . you will need this skill in order to help you convert measurements. We will be looking at the metric measures of mm, cm, m, km, and the imperial measure of inches, yards and miles(the old way we used to measure in England)



Look around your home and decide what unit of measurement you would use to measure each thing with.

The smallest unit is mm there are 10 of these in 1cm they are tiny!

1cm is about the width of your little finger, there are 100 of these in a m

1m is about the width of your desk in school, we would measure the corridor in m.

There are 1000m in 1km, you would measure the distance from school to the town centre in km. In England even though we measure nearly everything in metric (mm,cm,m) we still measure journeys in miles. One mile =1.6km.



Use the place value card to help you convert the measures on the sheet below. Remember if it is x10 there is one zero, so one place value space. If there are 2 zeros(100), 2 place values, and if it is by 1000 - 3 zero's = 3 place value places.

I.e. m to cm 25m into cm is x100 = 2500cm 450mm into cm  $\div$  by 10=45cm Now try these

	Mittimetres	Centimetres	Met	res 🔽
20	10 mm	2 Cm	0.01	
2)		5 Cm		
30			0.09	m
93	25 mm			
51		7.5 Cm		
61	20 mm			
21			0.1	m
Conver	t between millin	netres and Centimetres:		
8)	9mm = 0.4 Cm	11) 90mm =	14) 10	o mm =
9)	= 0.7 Cm	12) 75 mm =	25)	= 0.75 Cm
0.753	= 1.0 Cm	23) 90 mm ×	26) 27	5 mm =
20)				
20) Conver	t between Cent	imetres and metres:		
20) Conver 27) 10	re between Cent IO Cm = 1 m	20) 20 Cm =	230	= 0.9 m
20) Conver 27) 20 28)	t between Cent O CM = 1 M = 0.7 M	20) 20 Cm = 21) 75 Cm =	23) 29) 250	= 0.9 m Cm =

rade 3 Mei	esurement Worksh	of the following				Forener	v correct an	SWOT YOU GO	B 1 point!
Distance	e between	Distance of	a	Length	ot	Measure	Convert to	Measure	Convert to
two co	ontinents	marathon ra	ce	a baby's	feet	25-11-11	CM	200.00	meters
1	100	1				25mm		200cm	-
	• •	7	-		· · · · · · · · · · · · · · · · · · ·	10mm		800cm	
cm /	m/km	cm / m / km	e la	cm/m/	km	100mm		150mm	
.engin o	a doiphin	width of a to	wei	cength of a	sanooat	130mm		1600cm	
			2			1/5mm	Convertion	8000cm	Convert to
*					6		MM		KM
cm/	m / km	cm / m / km		cm/m/	km	1.5cm		1000m	
Size of a	frying pan	Length of golf course		Height of	door	2.6cm		2500m	
8		14 0				5.8cm		100,000m	
		PIC	2	ŧ		10.2cm			Convert to CM
		25				20.4cm		1km	
cm/	m / km	cm / m / km		cm/m/	km	Total p	oint score		
1)	1cm =	<b>mm</b>		2)	2cm =	mm	L		
1)	1cm = _	mm		2)	2cm =				
3)	3cm = _	mm		4)	4cm =	_mm			
5)	1m =	cm		6)	2m =	cm			
7)	3m =	cm		8)	4m =	m			
9)	1km = _	m		10)	2km =	_ m			
11)	3km = _	m		12)	4km =	_ m			
Which	h is the mo	st? Circle the	e large	st amoun	t in each bo	х.			
	1 m	10	m	1	.00 m	1 m			
C	1 km	100	cm	5	00 cm	200 cm			
	1 cm	200	mm		1 km	300 mm			
Use g	reater thar	ı (>), less tha	an (<) c	or equals	(=) to compa	are the amou	unts.		
1)	1 m	>	10 cm	2)	1 km	100	10 m		
3)	20 mm		1 cm	4)	80 cm	1	m		
-	200 m		1 km	6)	3cm	40	mm		
5)									
5) 7)	10 mm		1 cm	8)	2 km	300	10 m		

Can you match the	equal measurements?	Convert.	
1 m	10 cm	<b>1 a.</b> 7 cm = mm	<b>1 b.</b> 50 mm = cm
1.1 m	1 mm	<b>2 a.</b> 400 cm = m	<b>2 b.</b> 1 m = cm
2.5 m	1000 cm	<b>3 a.</b> 1000 cm = m	<b>3 b.</b> 700 cm = m
0.1 m	111 cm	<b>4 a.</b> 30 mm = cm	4 b. 20 mm = cm
0.25 m	¼m	<b>5 a.</b> 10 mm = cm	5 b. 8 cm = mm
10 m	2500 cm	6 a. 6 m = cm	6 b. 5 m = cm
1.01 m	110 cm	7 a. 2 m = cm	<b>7 b.</b> 800 cm = m
1.11 m	100 cm	<mark>8 a.</mark> 9 m = cm	8 b. 3 m = cm
25 m	101 cm	<b>9 a.</b> 90 mm = cm	9 b. 10 cm = m
0.01 m	250 cm	10 a. 4 cm = mm	10 b. 60 mm = cm
A line of children from 3B is 1 from 3T is 18 metres long. H the children stood together?	14 metres long. A line of children ow long would the line be if all	Stefan catches a worm that n catches a worm that measure is Stefan's worm? Give your	neasures 77mm long. Barry s 57mm long. How much lon answer in centimetres.
Emily's classroom is 9m long. long. How much longer is the classroom?	The school dining room is 21m e school dining room than Emily's	Hillary walks 1000m to scho Hillary walk to school?	ol. How many kilometres doe
Mrs Matthews is 168cm tall. their total height when added	Bridgette is 98cm tall. What is I together?	In an 800 metre race a runne has the runner already run?	r has 345m left to run. How
Bertie builds a 54cm tower. T How tall is Terry's tower?	Terry's tower is twice as long.		

1.	Ian cycles 8 kilometres a day. How many kilometres does he cycle in 4 days?
2.	Susan's pile of books are 95cm high. Henry's pile of books are 104cm high. Barbara's pile of books are 107cm high. How tall would the pile of books be if they put them together? Write your answer in metres and centimetres.
3.	Nancy lives 839 metres away from the school . Tom lives 328 metres away from the school. How much further does Nancy live away from the school compared to Tom?
4.	The children in Class 3 walked a total of 2000 metres for charity. How many kilometres did they walk?
5.	Suzanne pours 9ml of water into three jugs. How much water is in the jugs altogether?
6.	Kevin fills the paddling pool using 3500 ml of water. How many litres does it take to fill the paddling pool?
7.	Gino has a 500ml bottle of lemonade. She drinks 225ml. How much lemonade is left?
8.	A bag of flour weighs 500g. How much does 3 bags of flour weigh? Write your answer in kilograms and grams.
9.	Graham's toy car weighed 33g. Joe's car weighs 69g. How much more did Joe's car weigh?
10.	The weight of the two parcels altogether is 2.5 kilograms. How many grams do the parcels weigh?

## Length Problems

- 1. Derrick skips 3 metres and then hops 4 metres. How far does Derrick hop and skip?
- 2. Samantha's ribbon is 55cm long. Timothy's ribbon is 35cm long. How much ribbon do they have altogether?
- 3. Tariq has a 2 metre rod. How many centimetres long is the rod?
- 4. A pile of books is 15cm high. Another pile of books is 12cm high. How high would the books be if they were in one pile?
- 5. Hamish's classroom is 7m long. Mercy's classroom is 9m long. How long are both classrooms in total?
- 6. The school hall at St. Joseph's is 1500cm long. How many metres long is it?
- 7. Pierre builds a 2m train track for his train. Jean builds a 3m track for his train. How long would the track be if they joined them together?
- 8. Dan and Jay take part in a skipping competition. Dan skips 27 metres. Jay skips 34 metres. How many metres do they skip in total?
- 9. Claudette draws a 15cm chalk line on the playground. She draws another chalk line 11cm long. What is the length of the two lines in total?
- 10. Toni's classroom is 8m long. How many centimetres long is it?





For these three measurement perimeter, area and volume, we have to use different units. Because the perimeter is the straight line around a shape you measure with just mm,cm, m or km.

for this shape the edges are 5cm on the long side and 3cm on the short sides, so the perimeter is 5+5+3+3= 16cm



For the same 2D shape the Area is how many squares the inside of the shape takes up, this measures 5 squares 3 times 5x3= 15, because we are now measuring squares, we need to include that in our measurement = 15cm<sup>2</sup> (remember the little <sup>2</sup> is how we write this)



For Volume we are looking at how much space a 3D object takes up, to work this out we have to look at each row, they have 8 cubes and go back 3 cubes. This makes the bottom layer. Then we make this layer 5 times up. So the calcuation is 8x3x5 = 120 cm<sup>3</sup> We have to have the little 3 to represent cubed. (like the squared <sup>2</sup> and cubed <sup>3</sup> numbers we looked at last term)



Area (Ixw)	Perimeter (_ l+w+l+w) all the way around the edge

Find the area and perimeter of these shapes.

Now use what you know to find the area and perimeter of each of these shapes. You will have to use what you know about rectangles.





Once you have mastered the area and perimeter of regular rectangles, we can move onto compound shapes, these are made up of more than one square or rectangle.









triangles and the different angles. Then find the area and perimeters of these.





