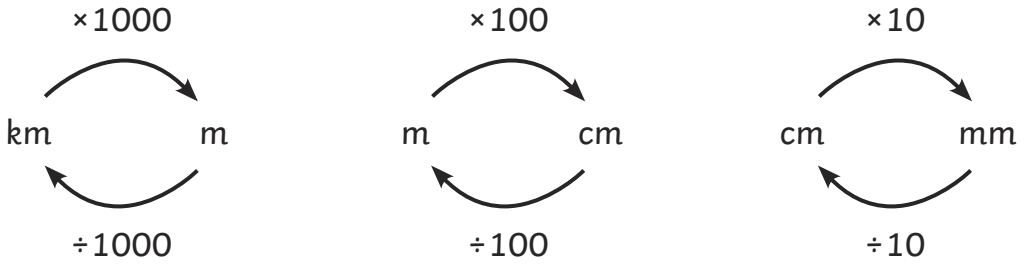
Converting Metric Units of Length

I can read, write and convert between standard units of length.



1. Use the above charts to help you to convert these length measurements:

a.	4km	=	m	b.	8.5km	=	m
c.	1500m	=	km	d.	12m	=	cm
e.	6.5m	=	cm	f.	900cm	=	m
g.	9cm	=	mm	h.	16.3cm	=	mm
i.	145mm	=	cm	j.	99mm	=	cm

2. Here are the measurements of some pieces of seaweed, which do you think is the odd one out? Explain why.

0.65m	65cm	6.5m	650mm

3. Clara went for a walk along the beach. She walked 950m, then had a rest. She walked another 1.2km. How far did she walk in total? Write your answer in kilometres, using decimals. Show how you worked out the answer.

4. Two friends are flying their kites on the beach. The length of the string of Jatinder's kite measures 1.25m. Sydney's string measures 1500mm. Sydney says his kite string is more than 50cm longer than Jatinder's kite string. Is he right? Show how you worked out the answer.

Converting Metric Units of Length **Answers**

1.

a. 4km = **4000m**	b. 8.5km = **8500m**
c. 1500m = **1.5km**	d. 12m = **1200cm**
e. 6.5m = **650cm**	f. 900cm = **9m**
g. 9cm = **90mm**	h. 16.3cm = **163mm**
i. 145mm = **14.5cm**	j. 99mm = **9.9cm**

2. Here are the measurements of some pieces of seaweed, which do you think is the odd one out? Explain why.
   The odd one out is 6.5m, all the other measurements are equal.

3. Clara went for a walk along the beach. She walked 950m, then had a rest. She walked another 1.2km. How far did she walk in total? Write your answer in kilometres, using decimals. Show how you worked out the answer.
   2.15km

4. Two friends are flying their kites on the beach. The length of the string of Jatinder's kite measures 1.25m. Sydney's string measures 1500mm. Sydney says his kite string is more than 50cm longer than Jatinder's kite string. Is he right? Show how you worked out the answer.
   No he is not right. His string is 25cm (250mm) longer.
   1.25m = 125cm = 1250mm 1500mm – 1250mm = 250mm = 25cm.

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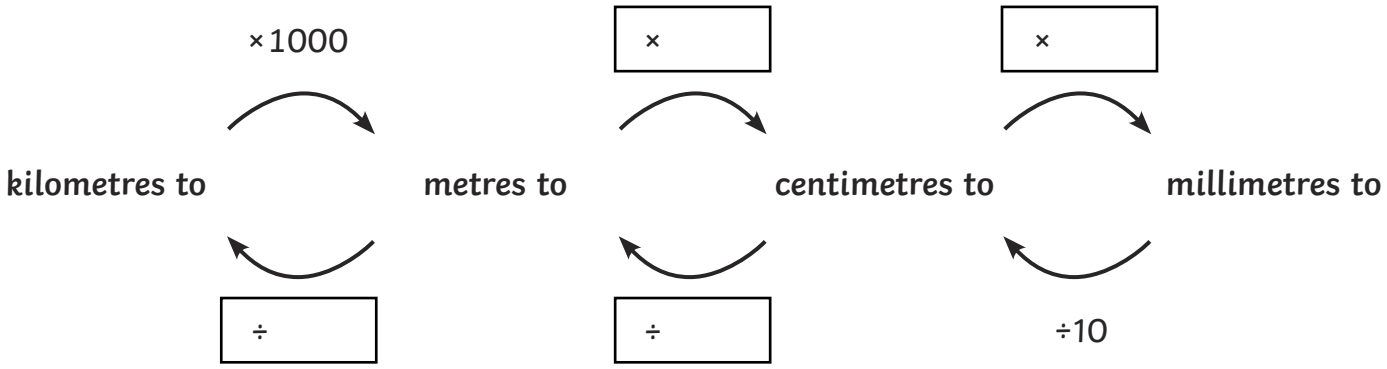


1. Fill in the missing boxes above.
2. Use the above charts to help you to convert these length measurements:

a.	4.7km	=	m	b.	8.125km	=	m
c.	9200m	=	km	d.	8.5m	=	mm
e.	5.9m	=	cm	f.	4.68m	=	cm
g.	1200cm	=	m	h.	679cm	=	m
i.	6.18cm	=	mm	j.	7884mm	=	m

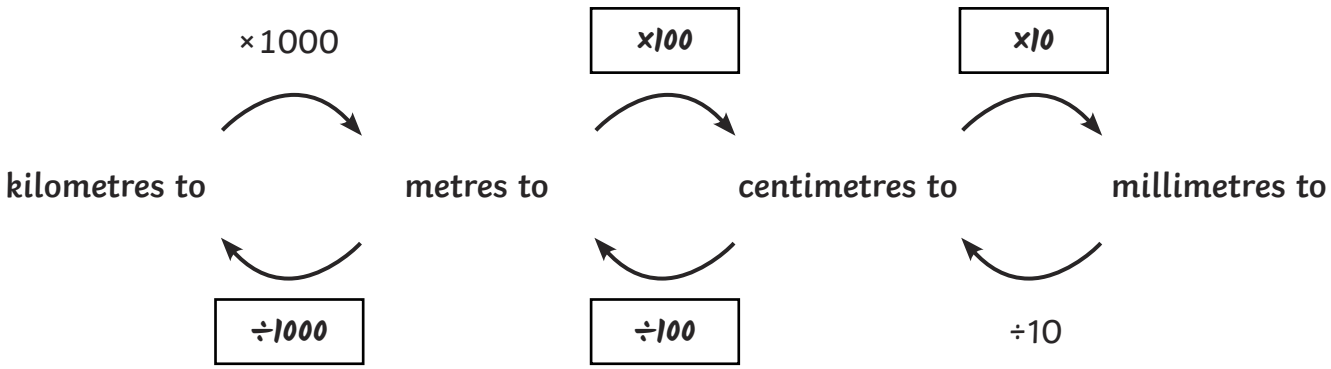
3. Here are the measurements of some boats, which do you think is the odd one out? Explain why.

15 000mm	1500cm	150m	15m

4. On the beach, two teams were making trails of shells. At 11 o'clock, Team A's trail is 15.75m and by 12 o'clock they had made it 13 000mm longer. Team B's trail measured 1345cm at 11 o'clock and by 12 o'clock it was 0.015km longer. Which team had the longer trail? Show how you worked out the answer.

Converting Metric Units of Length **Answers**

1.



2.

a. 4.7km = **4700m**	b. 8.125km = **8125m**
c. 9200m = **9.2km**	d. 8.5m = **8500mm**
e. 5.9m = **590cm**	f. 4.68m = **468cm**
g. 1200cm = **12m**	h. 679cm = **6.79m**
i. 6.18cm = **61.8mm**	j. 7884mm = **7.884m**

3. Here are the measurements of some boats, which do you think is the odd one out? Explain why.

   The odd one out is 150m, all the other measurements are equal.

4. On the beach, two teams were making trails of shells. At 11 o'clock, Team A's trail is 15.75m and by 12 o'clock they had made it 13 000mm longer. Team B's trail measured 1345cm at 11 o'clock and by 12 o'clock it was 0.015km longer. Which team had the longer trail? Show how you worked out the answer.

   Team A: 15.75m + 13 000mm.

   Change to same unit (here centimetres) 1575cm + 1300cm = 2875cm

   Team B: 1345cm + 0.015km

   Change to same unit (here metres) 13.45m + 15m = 28.45m

   Now change both to the same unit: Team A = 28.75m; Team B = 28.45m

   Team A had the longer trail.

(Answers may have different conversions)

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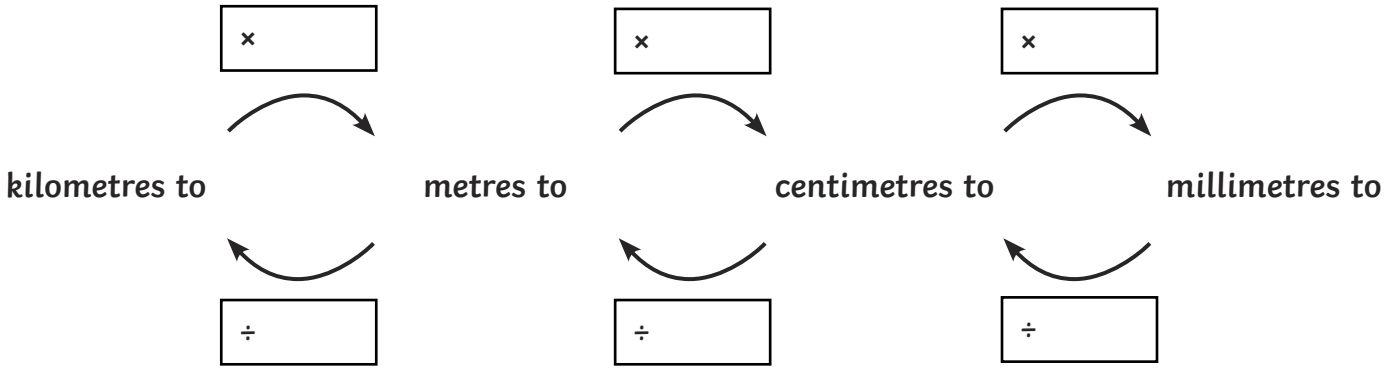


1. Fill in the missing boxes above.
2. Use the above charts to help you to convert these length measurements:

a.	5.83km	=	m	b.	9.755km	=	m
c.	1009m	=	km	d.	8090m	=	km
e.	3.1m	=	mm	f.	14.77m	=	cm
g.	5705cm	=	m	h.	13 700cm	=	km
i.	14.68cm	=	mm	j.	1330mm	=	cm

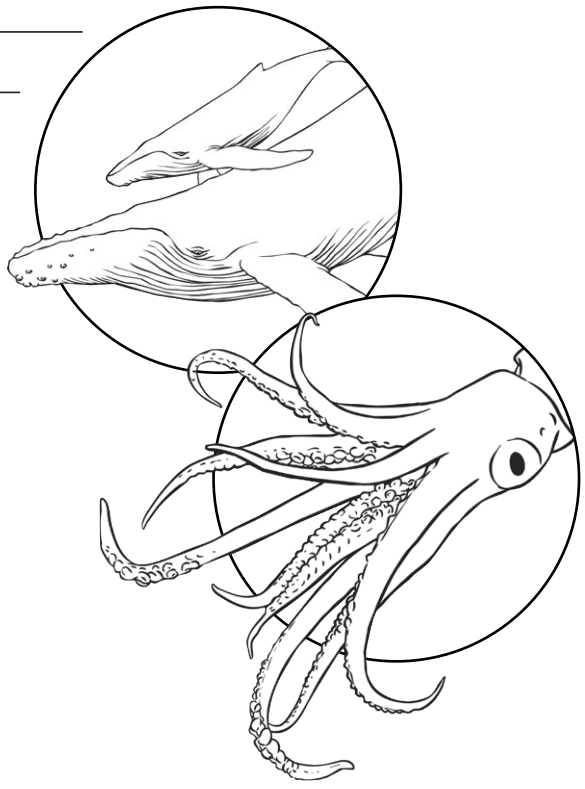
3. Write these measurements using as many different units as you can. One is done for you:

450m	0.45km, 45 000cm, 450 000mm
79 500cm	
1.2km	

4. Children measure how far it is to walk from where the coach is parked, over the beach to the sea, using different units of measurement. Which do you think is correct? Explain why.

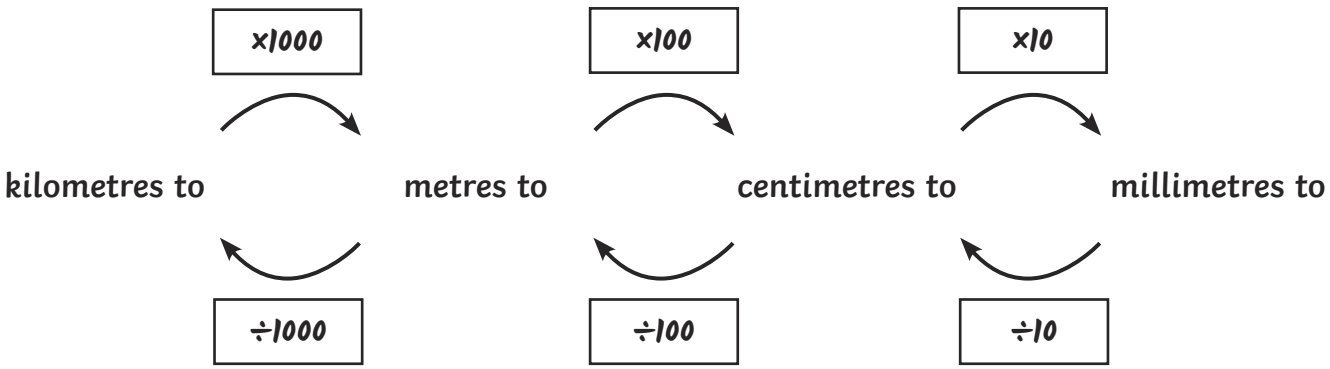
7.05m	705cm	7050mm	0.75km

5. Back at school, the children researched into different large marine animals. Daisy found out that a humpback whale calf can measure 600cm in length and grow to be a gigantic 16m long. Abdul found out that, at its time of hatching, a giant squid is only 140mm long and can grow to be over 10 000cm in length. Daisy said that the humpback whale calf is more than 38 times longer than the baby giant squid. Abdul said that an adult giant squid is over 650 times longer than a baby giant squid. Who is correct? Show your working out.



Converting Metric Units of Length **Answers**

1.



2.

a. 5.83km = **5830m**	b. 9.755km = **9755m**
c. 1009m = **1.009km**	d. 8090m = **8.09km**
e. 3.1m = **3100mm**	f. 14.77m = **1477cm**
g. 5705cm = **57.05m**	h. 13 700cm = **0.137km**
i. 14.68cm = **146.8mm**	j. 1330mm = **133cm**

3. Write these measurements using as many different units as you can. One is done for you:

450m	0.45km, 45 000cm, 450 000mm
79 500cm	**0.795km, 795m, 795 000mm**
1.2km	**1200m, 120 000cm, 1 200 000mm**

4. Children measure how far it is to walk from where the coach is parked, over the beach to the sea, using different units of measurement. Which do you think is correct? Explain why.
   The correct measurement for the walk to the beach will probably be 0.75km, all the other measurements are equal to 7.5 metres which wouldn't really count as a walk.

5. Back at school, the children researched into different large marine animals. Daisy found out that a humpback whale calf can measure 600cm in length and grow to be a gigantic 16m long. Abdul found out that, at its time of hatching, a giant squid is only 140mm long and can grow to be over 10 000cm in length. Daisy said that the humpback whale calf is more than 38 times longer than the baby giant squid. Abdul said that an adult giant squid is over 650 times longer than a baby giant squid. Who is correct? Show your working out.
   Daisy isn't correct. 14cm x 38 = 532cm
   This is less than the length of a humpback whale calf.
   Abdul is correct. 14cm x 650 = 9100cm
   An adult giant squid is longer than 9100cm.

Extra Challenge

I can read, write and convert between standard units of length.

You probably already know these conversion facts:

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

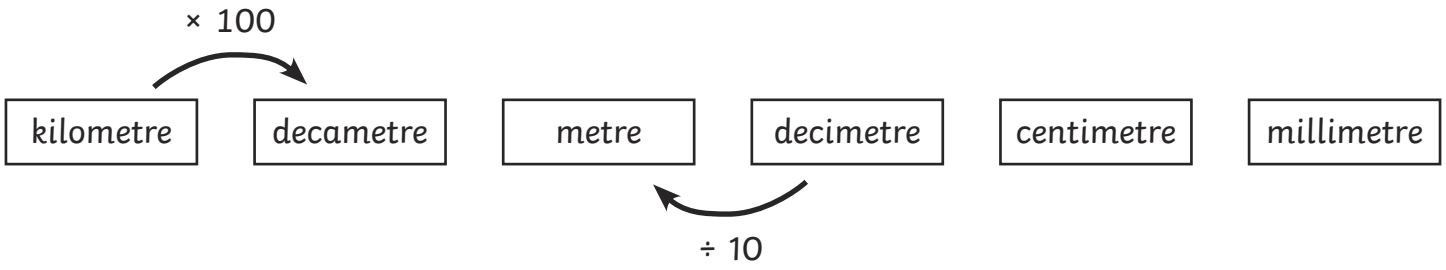
Here are some other conversion facts which aren't used as often:

1 decimetre (dm) = 10cm	1 decametre (dam) = 10m

So from largest to smallest, this is how the units are ordered:

kilometre, decametre, metre, decimetre, centimetre, millimetre

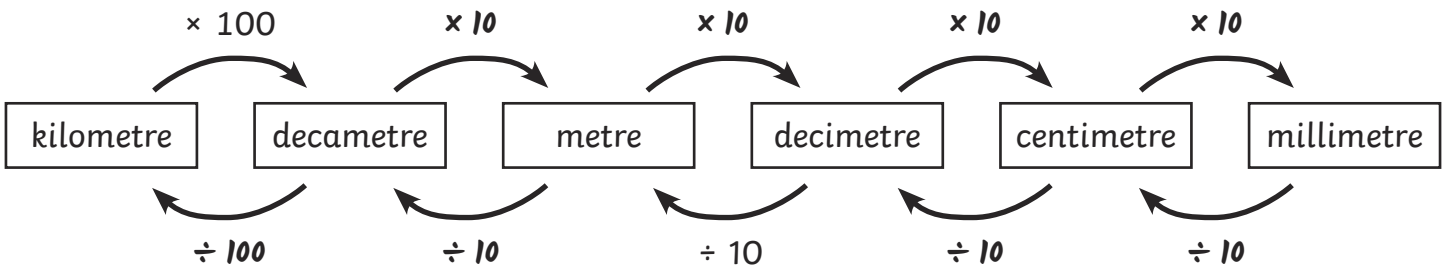
Create a conversion chart to help you answer the questions below. This one has been started.



Use the information above to convert these units of measurement:

a) 10km = ____ dam	b) 5dam = ____ m	c) 2.5dam = ____ dm
d) 3.7dm = ____ mm	e) 12.2dm = ____ dam	f) 550mm = ____ dm
g) 5560dam = ____ km	h) 1800cm = ____ dam	i) 13.55cm = ____ dm

Extra Challenge **Answers**



a) 10km = 1000dam	b) 5dam = 50m	c) 2.5dam = 250dm
d) 3.7dm = 370mm	e) 12.2dm = 0.122dam	f) 550mm = 5.5dm
g) 5560dam = 55.6km	h) 1800cm = 1.8dam	i) 13.55cm = 1.355dm