Challenge 1

Convert these measurements.

M to KM:

a)   173 = 0.173km

b)   2,575 = 2.575km

c)   685 = 0.685km

d)   3,887 = 3.887km

e)   999 = 0.999km

KM to M:

f) 0.95 = 950m

g) 2.68 = 2680m

h) 3.74 = 3740m

i) 28.7 = 28700m

j) 4.985 = 4985m

Challenge 2

Put < > or = in between the two measurements that you have been given.

M	Comparison	KM
412	>	0.4
7,572	>	7.5
58	<	0.58
982	<	9.81
2,574	>	2.51
325	=	0.325

Challenge 3

Fill in the missing amounts with one possibility so that this list ascends in order.

7.415km, 7,426m, _____km, 7,451m, _____m, 7.6km, _____m.

There are many possible answers to this questions as long as the answer falls between the two measurements either side of it, then it is correct.

Fill in the missing amounts with one possibility so that this list descends in order.

5,008m, _____km, 5,010m, 5,100m, _____km, 5,110m, _____km.

There are many possible answers to this questions as long as the answer falls between the two measurements either side of it, then it is correct.

Lesson 2 problem solving using measurement

Challenge 1

Add these measurements together and show your answer in cm:

    a) 35mm + 3cm = 7.5cm

    b) 45mm + 4.5cm= 9cm

    c) 75mm + 2.5cm = 10cm

Subtract these measurements from each other and show your answer in meters:

d) 140cm - 1.2m = 0.2m

e) 440cm - 3.2m = 2.76m

f) 730cm - 5.5m = 4.77m

Challenge 2

a) North Street is 1.16km long. South Street is 329m shorter. How long is South Street in M?
    Answer - 831m

b) Lena has 2.5m of rope and 675cm of wool. How much material does she have altogether in cm?
      Answer - 925cm

c) A race track is 1.2km. I have ran 150m. How much farther do I have left in km?
    1.05km

Challenge 3

Terry the tortoise says:

"0.595km is **smaller than** 400m because the first 0.595km starts with a zero whereas 400m starts with a 4."

Show/explain that Terry is wrong.

Answer – Terry would be incorrect. His major mistake is that both the measurements are different units. This means that Terry would find it harder to compare their size. If Terry converted one of the measurements first so that they both had the same unit of measurement, he would get a different answer. E.g.

0.595km = 595m   595m is larger than 400m

Challenge 1

Multiply these measurements together and show your answer in km:

    a) 5,260m x 3 = 15.78km

    b) 3,720m x 6 = 22.32km

    c) 9,210m x 5 = 46.05km

Divide these measurements and show your answer in m:

d) 4,936cm ÷ 4 = 12.34m

e) 7,245cm ÷ 3 = 24.15m

f) 9,456cm ÷ 3 = 31.52m

Challenge 2

a) The wall of my living room is painted by five people. The wall is 2.3m long. In cm, how much does each person paint?
Answer - 460cm

b) The total length of a carpet is 360cm. It is cut into three sections. In m, how long is each piece of carpet?
Answer – 1.2m

c) James runs 510m. I run four times further. In km, how much do I run?
Answer – 2.04km

Challenge 3

Terry the tortoise says:

"3/10 of a meter is bigger than 2/5 of a meter because 3 is bigger than 2."

Show/explain that Terry is wrong.

A meter is out of a hundred so the fractions need to be out of 100.

3/10 x 10 = 30/100

2/5 x 20 = 40/100

As it is now out of 100 it can be made into a decimal.

30/100 is the same as 0.3m

40/100 is the same as 0.4m

Terry is wrong because 0.4m is larger than 0.3m. I know this as in the tenths column four is larger than three.

Challenge 1

Convert these measurements.

G to KG:

a)   250 = 0.25kg

b)   370 = 0.37kg

c)   990 = 0.99kg

d)   420 = 0.42kg

e)   730 = 0.73kg

KG to G:

f) 0.6 = 600g

g) 0.7 = 700g

h) 0.9 = 900g

i)   7.3 = 7300g

j) 4.6 = 4600g

Challenge 2

Put < > or = in between the two measurements that you have been given.

G	Comparison	KG
635	>	0.6
2,541	<	2.6
510	=	0.51
63	<	0.63
3,400	=	3.4
745	<	0.75

Order these measurements in ascending order.

490G	0.5KG	510G	0.48KG	0.501KG	485G

0.48KG, 485G, 490G, 0.5KG, 0.501KG, 510G

Order these measurements in descending order.

0.71KG	0.699KG	701G	690G	0.7KG	0.708KG

0.71KG, 0.708KG, 701G, 0.7KG, 0.699KG, 690G