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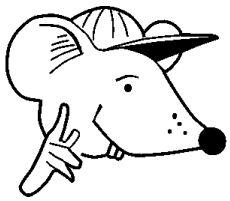
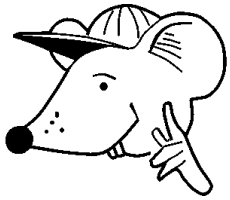


MATHEMATICS



N.S. Yr. 5 P.87

Use all four operations to solve word problems involving length, mass or capacity.

Equipment

Paper, pencil, calculator, calendar.

MathSphere

Concepts

Children should be familiar with the units concerned with length, mass and capacity:
Kilometres, metres, centimetres and millimetres
Kilograms, grams
Litres, millilitres
Miles, gallons, pints.

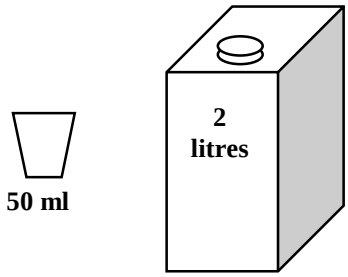
If they do not have a good working knowledge of these units, they will find the problems in this module difficult and should do more practical work before proceeding.

They should be able to understand the language used in problems and be able to extract the essential information. They should then be able to solve the problems and say how they solved them.

1. A woman drives a car for 245 km. Her husband then drives for 270 km. Their journey is 688 km altogether. How much further do they need to drive?

2. Natasha eats an average of 22 g of sweets a day. How may grams does she eat in the last three months of the year?

3. How many 50 ml glasses can be filled from a two litre container?



4. A sheet of paper weighs 4.2 grams. How much does a pack of 100 sheets weigh?

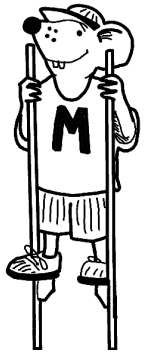
5. A book weighs 50 g. How much does 25 similar books weigh?

6. Addy, Divvy, Multy and Subby take part in a cake eating contest (you know how fond Math Rats are of cake!).
Addy eats 560 g.
Divvy eats 637 g.
Multy eats 394 g.
Subby eats 723 g.
How much cake did they eat altogether?


Four very happy Maths Rats

7. Divvy has been measuring the rate at which a plant grows. He found that it grows at 3 mm per day on average.
How much would it grow in three weeks?

8. A statue is four and a half times as tall as it is wide. If it is 64 cm wide, how tall is it?


The world's first statue of a Maths Rat on stilts

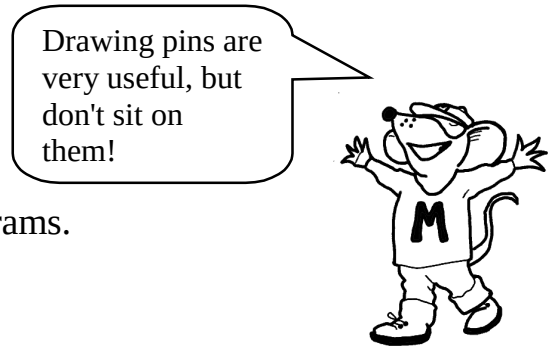
9. The distance round a running circuit is 855 m.
Runners must run around the circuit twelve times.
How far do they run?
Give you answer in kilometres and metres.

10. A bottle of drink weighs 350 grams. Eight bottles fit into one crate.
How much do the bottles in a crate weigh?
How much do the bottles in seven crates weigh?
Give your answers is kilograms and grams.

1. A cup holds 350 ml of drink. How many cups can be filled from a container which holds three and a half litres of drink?

2. A teaspoon holds seven millilitres. How may teaspoons can be filled from a bottle which holds 1 litre 400 millilitres of liquid?

3. On average a car holds 50 litres of petrol. How many cars can be filled from a tank holding 20 800 litres?



4. A box of 200 drawing pins weighs 180 grams. Using a calculator, find the weight of one drawing pin.

5. Builders are building some new houses on the Trouble Free Estate. Each house needs 170 m of wire. How much wire do 20 houses need? Give your answer in kilometres and metres.

6. A baby kangaroo weighed 50 grams when it was born. It now weighs 1 kg 300 grams. How many times heavier is it now than when it was born?

7. A magnet can lift 450 g. A larger magnet can lift 20 times as much. How much can the large magnet lift? Give your answer in kilograms.

8. Popcorn comes in 1 kg bags. If there are approximately 2 000 popcorns in a bag, how much does one popcorn weigh?

9. One recipe for Bubble and Squeak uses 300 g of cabbage, 450 g of potatoes, 30 g of butter and 1 tablespoon of flour. This is enough to feed six people. How much of each ingredient is needed to feed 9 people?

10. A baby rabbit can hop 0.6 m. An adult rabbit can hop three times as far. How far can the adult rabbit hop?
How far could an adult rabbit hop in twenty hops?

1. A drinks bottle contains 583 millilitres of orange juice. How much would be in the bottle if another 274 millilitres is added?

2. A CD case is 0.9 cm thick. How high would a pile of 15 CD cases be? Give your answer in centimetres.

3. A new car holds 50 litres of petrol. How much petrol would 16 of these cars hold?

4. If Michael drank 5 cans of No-Hope Cola and each can holds 400 ml, how much did he drink altogether? What is this in litres?

5. Four people were having dinner. Altogether they ate 120 g meat, 200 g potatoes and 240 g of other vegetables. How much would they have eaten if there had been 6 people?

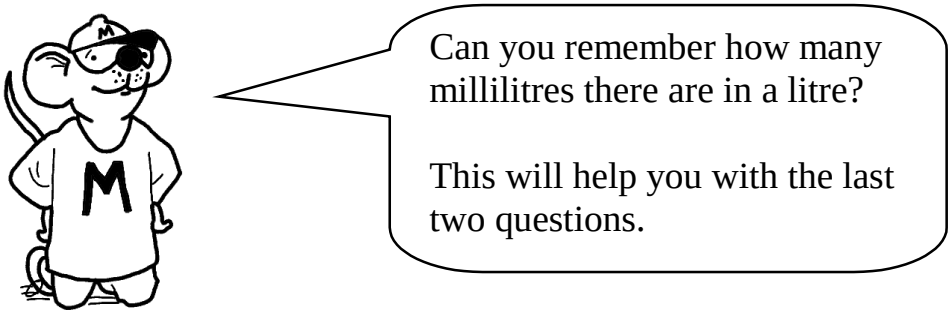
6. If there are eight pints in a gallon, how many pints are there in 15 gallons?

7. Half a litre of pea soup needs 200 grams of peas. How much soup can be made from 800 grams of peas?

8. A bag contains 5 kg of potatoes. 600 g are used for a meal. How many grams are left in the bag?

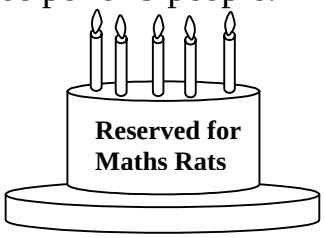
9. A club sold 100 cans of drink. Each can is 440 ml.
What is the volume of drink they sold altogether.
Give your answer in litres.

10. Another club sold 50 litres of drink in 250 ml cans.
How many cans did they sell?



1. Change this sponge recipe for 6 people to a recipe for 9 people:

6 eggs
120 g caster sugar
150 g plain flour
1 teaspoon baking powder
20 g jam



2. Daniel is making some concrete statues for his garden.
For each statue he uses 2.5 litres of sand, 600 g of cement and 1.5 litre of water.
How much sand, cement and water will he need for 5 statues?

3. Mrs Jones wants to drive from Nettletown to Suntown, a journey of 480 km.
Three quarters of the way there, her car breaks down. How far has she gone?

4. A jug holds 678 ml of water. Ken pours 390 ml into a glass.
How much is left in the jug?

5. A fast train travels at 180 km per hour.
How far will it go in four and a half hours?
How far will it go in two and a quarter hours?

6. A container holds $16^{1}/_{2}$ litres of lemon juice.
How many half litre jugs would this fill?

7. If a box contains 3.6 kg of paper, how much paper would 12 similar boxes contain?

8. The length of one side of a regular hexagon is 6.2 cm.
What is the perimeter of the hexagon?

9. How many lengths of elastic 9 cm long could be cut from a roll 270 cm long?

10. A model train engine is 20 cm long. The real train is 25 times longer.
How long is the real train?

Don't forget, there are 100 centimetres in a metre.

We already know that, thank you.

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Answers

Page 3

1. 173 km **2.** 2 024 g **3.** 40 glasses **4.** 420g
5. 1 250 g or 1kg 250 g **6.** 2 314 g or 2 kg 314 g
7. 63 mm **8.** 288 cm **9.** 10 km 260 m
10. 2 kg 800 g, 19 kg 600 g

Page 4

1. 10 cups **2.** 200 teaspoons **3.** 416 **4.** 0.9 g **5.** 3 km 400 m
6. 26 **7.** 9 kg **8.** $^1/_2$ g
9. 450 g cabbage 675 g potatoes 45 g butter $1^1/_2$ tablespoons flour
10. 1.8 m 36 m

Page 5

1. 857 ml **2.** 13.5 cm **3.** 800 litres **4.** 2 000 ml or 2 litres
5. 180 g meat 300g potatoes 360 g vegetables **6.** 120 pts
7. 2 litres **8.** 4 400 g **9.** 44 litres **10.** 200 cans

Page 6

1. 9 eggs 180 g caster sugar 225 g plain flour $1^1/_2$ teaspoons baking powder
30 g jam **2.** 12.5 litres sand 3 000 g (3kg) cement 7.5 litres water
3. 360 km **4.** 288 ml **5.** 810 km 405 km **6.** 33
7. 43.2 kg **8.** 37.2 cm **9.** 30 **10.** 500 cm (5m)