4.2 Compound Measure

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January 2018 1F

6 (a) Complete the following sentences by writing a suitable metric unit on each of the dotted lines.

(i) The weight of a pen is 14 .....

(ii) The length of a table is 1.8 .....

(2)

(b) Change 3.9 litres into millilitres.

.....millilitres

(1)

January 2018 2FR

7 (a) Complete the following sentences by writing a sensible metric unit on each of the dotted lines.

(i) The length of a car is 3.4 .....

(ii) The weight of a calculator is 30 .....

(2)

(b) Bradley started a cycle race at 3 12 pm.
He finished the race 2 hours 55 minutes later.

(i) Write 3 12 pm as a time using the 24-hour clock.

.....

(1)

(ii) At what time did Bradley finish the race?

.....

(2)

4 (a) Change 650 centimetres into metres.

..... metres
(1)

(b) Change 8 litres into millilitres.

..... millilitres
(1)

Memona has a 6 kg sack of rice and some empty bags.
She fills each bag with 475 grams of rice from the sack.

(c) How many bags can Memona completely fill with rice?

.....
(3)

1 The table gives information about the weights, in kilograms, of five animals.

Animal	Weight in kilograms
African buffalo	725
Indian elephant	3178
Giraffe	800
Pilot whale	2205
Walrus	1013

The weight of a blue whale is 20 times the weight of the giraffe.

(d) Work out the weight of the blue whale.
Give your answer in tonnes.
1 tonne = 1000 kg

..... tonnes
(2)

June 2018 2FR

$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

17 A box is put on a table.

The face of the box in contact with the table is in the shape of a rectangle, 2 m by 1.25 m.
The pressure on the table due to the box is 42 newtons/m^2

Work out the force exerted by the box on the table.

..... newtons

January 2019 2F

22 A block of wood has a mass of 3.5 kg.
The wood has density 0.65 kg/m^3

(a) Work out the volume of the block of wood.
Give your answer correct to 3 significant figures.

m^3

(3)

2 Amelie is using ribbon to make decorations.

She has 7 metres of ribbon.
Each decoration needs 45 centimetres of ribbon.

What is the greatest number of decorations that Amelie can make?

(Total for Question 2 is 3 marks)

25

$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

A box, in the shape of a cuboid, is going to be put on a table.

The whole of one face of the box will be in contact with the table.
The force exerted by the box on the table is always 105 newtons.

The box is 5 m by 4 m by 3 m.

The greatest pressure exerted by the box on the table is P newtons/m^2
The least pressure exerted by the box on the table is Q newtons/m^2

Work out the value of $P - Q$

.....

(Total for Question 25 is 3 marks)

3 (a) Complete the following sentences by writing a sensible metric unit on each of the dotted lines.

(i) The distance from Cairo to Nairobi is 5211 .....

(ii) The weight of an egg is 20 .....

(iii) The area of the floor of a classroom is 260 .....

(3)

Cara has a bottle of juice.
There is 1 litre of juice in the bottle.

Cara makes some drinks.
She uses exactly 30 millilitres of this juice to make each drink.

Cara makes as many drinks as possible.

(b) How many drinks does Cara make?

.....

(3)

18 Change 32.4 m^3 into cm^3

..... cm^3

(Total for Question 18 is 2 marks)

January 2020 2F

25 The density of gold is 19.3 g/cm^3
A gold bar has volume 150 cm^3

Work out the mass of the gold bar.

..... g

(Total for Question 25 is 2 marks)

23 The diagram shows a box in the shape of a cuboid.

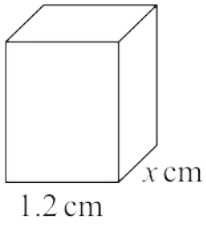


Diagram **NOT** accurately drawn

The box is put on a table.
The face of the box in contact with the table has length 1.2 metres and width x metres.

The force exerted by the box on the table is 27 newtons.
The pressure on the table due to the box is 30 newtons/m^2

$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

Work out the value of x.

$x =$ .....

(Total for Question 23 is 3 marks)

June 2020 2F

2 (a) Change 3 litres into millilitres.

.....millilitres
(1)

(b) Change 6500 grams into kilograms.

.....kilograms
(1)

January 2021 1F

6 Nav makes bracelets using cord.

Nav has a 6 metre length of cord.
Each bracelet needs 17.5 cm of cord.

Work out the greatest number of bracelets that Nav can make.

.....

(Total for Question 6 is 3 marks)

January 2021 1FR

20

(b) Change 1 m^3 to cm^3

..... cm^3

(1)

January 2021 2FR

3 (a) Complete the following estimates by writing a suitable metric unit on each of the dotted lines.

(i) The distance from Paris to Berlin is about 1000 .....

(ii) A bucket holds about 5 ..... of water.

(iii) The area of the screen of a mobile phone is about 90 .....

(3)

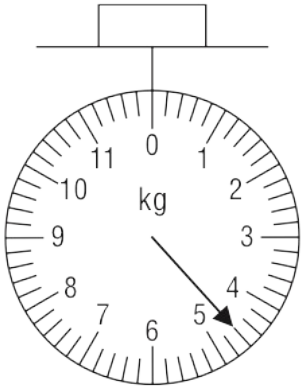
(b) Write down an estimate for the height of a bedroom door in a house.
Use a suitable metric unit.

....

(2)

2

The diagram shows a parcel on weighing scales.



The parcel weighs less than 6 kg.

(b) How many kilograms less?

..... kilograms
(1)

(c) Change 7.6 metres into centimetres.

..... centimetres
(1)

(d) Change 91 600 millilitres into litres.

..... litres
(1)

Ivan goes to the gym at 7 15 pm.

(e) Write this time using the 24-hour clock.

.....
(1)

June 2021 1F

6 Janine has 2 litres of orange squash.

She also has some empty cups.
When full, each cup holds 300 millilitres of orange squash.

Janine fills as many cups as possible.

How much orange squash does Janine have left after filling as many cups as possible?
State the units of your answer.

....

(Total for Question 6 is 3 marks)

November 2021 2F

4 (a) Change 5.48 metres into centimetres.

..... cm
(1)

(b) Change 4600 millilitres into litres.

..... litres
(1)

8 Mairi has a 2 metre length of string.
She cuts from the string as many lengths of 35 centimetres as possible.

Work out the length of string that she has left.
Give your answer in centimetres.

..... cm

(Total for Question 8 is 3 marks)

3 (a) Change 6 metres into centimetres.

..... centimetres
(1)

(b) Change 4500 grams into kilograms.

..... kilograms
(1)

Lauren has 3 litres of fruit juice.
She is going to use the fruit juice to make some drinks for a party.
Each cup of drink will contain 225 millilitres of fruit juice.

Lauren is going to make as many cups of drink as possible.

(c) Work out how much fruit juice Lauren has left when she has made as many cups of drink as possible.
Give your answer in millilitres.

..... millilitres
(4)

June 2022 1F

4

(d) Complete the following sentence by writing a suitable metric unit on the dotted line.

The length of a pen is 16 .....

(1)

June 2022 2F

9 3 cups each contain 200 millilitres of water.
4 jugs each contain x millilitres of water.

Emma pours all the water from the 3 cups and the 4 jugs into a container.
The total amount of water that Emma pours into the container from the 3 cups and 4 jugs is 3.5 litres.

Work out the value of x

$x =$ .....

2 Luca has 5 kg of chopped tomatoes.
He also has some empty tins.

When full, each tin holds 350 g of chopped tomatoes.

Luca fills as many tins as possible with the chopped tomatoes.

Work out the weight of the chopped tomatoes remaining after Luca has filled as many tins as possible.
Give the units of your answer.

....

(Total for Question 2 is 4 marks)

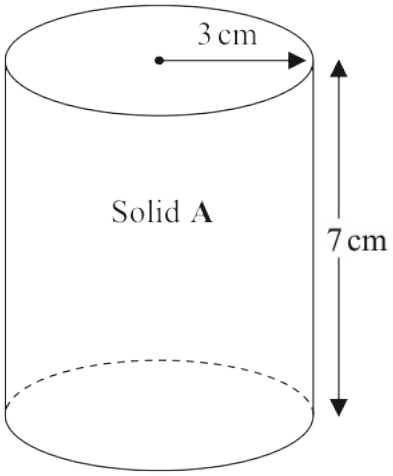
3

(d) Change 3.6 metres into centimetres.

..... cm

(1)

24 The diagram shows two solids, **A** and **B**, made from two different metals.



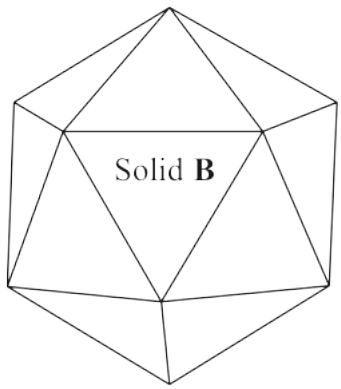


Diagram **NOT** accurately drawn

Solid **A** is in the shape of a cylinder with radius 3 cm and height 7 cm
Solid **A** has a mass of 2000 g

Solid **B** has a mass of 3375 g
Solid **B** has a volume of 450 cm^3

All of the metal from Solid **A** and Solid **B** is melted down to make a uniform Solid **C**

Given that there is no change to mass or volume during this process

work out the density of Solid **C**
Give your answer correct to one decimal place.

..... g/cm^3

(Total for Question 24 is 3 marks)

13 A wheel on a tractor has a diameter of 160 cm.

The tractor travels 1750 metres.

Work out the number of complete turns made by the wheel.
Show your working clearly.

.....

(Total for Question 13 is 4 marks)

4 Barney went for 4 walks on Tuesday.

The lengths of the walks were

800 metres
2 kilometres
1.7 kilometres
x metres

The total length of the 4 walks was 6250 metres.

Work out the value of x

x = ...

(Total for Question 4 is 3 marks)