



Units of measurement

- Making rough conversions between metric and imperial measures
- Justifying an appropriate degree of accuracy for a measurement

Keywords

You should know

explanation 1a

explanation 1b

explanation 1c

1 Copy and complete each statement.

a $8 \text{ km} = \square \text{ m}$

b $1500 \text{ m} = \square \text{ km}$

c $8.5 \text{ m} = \square \text{ cm}$

d $70 \text{ cm} = \square \text{ mm}$

e $0.65 \text{ m} = \square \text{ mm}$

f $560 \text{ cm} = \square \text{ km}$

g $2 \text{ hectares} = \square \text{ m}^2$

h $5400 \text{ cm}^2 = \square \text{ m}^2$

i $875 \text{ g} = \square \text{ kg}$

j $1.305 \text{ kg} = \square \text{ g}$

k $3.5 \text{ litres} = \square \text{ cm}^3$

l $950 \text{ litres} = \square \text{ m}^3$

2 Copy and complete the table. Choose from the items shown. One has been done for you.

	Approximate measure	Type of measure	Item
	2 m	length	door
a	1 tonne		
b	750 ml		
c	7500 m^2		
d	100 g		
e	10 m		
f	480 mm^2		
g	200 litres		
h	1 kg		
i	50 cm^2		
j	15 cm		



3 On average, a person lives for about 40 000 000 minutes.

a Work out how long this is to the nearest

i hour

ii day

iii year

b How many leap years are there in an average lifetime?

Give your answer to the nearest whole number.

In part **a iii**, assume that every year has 365 days.

Hint: about one in every four years is a leap year. 'One in four' is the same as one quarter

4 Justin has 547 tracks on his music player.

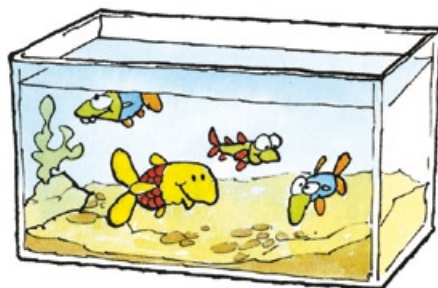
On average, each track is about $3\frac{1}{2}$ minutes long.

How long would they take to play altogether in days and hours, to the nearest hour?

5 A fish tank is in the shape of a cuboid. It can hold a maximum of 27 litres. The base of the tank is made of plastic. It is 25 cm wide and 50 cm long.

a What is the height of the fish tank?

b What is the area of glass needed to make the four sides of the tank?



6 Anthony is writing to his pen pal who lives in Paris.

a Anthony says that the distance from Manchester to Paris is 600 km. What do you think this measurement is correct to?

To the nearest 10 metres

To the nearest 100 metres

To the nearest kilometre

To the nearest 10 kilometres

b Anthony says that the flight from Manchester to Paris takes 1.5 hours. What do you think this measurement is correct to?

To the nearest second

To the nearest 10 seconds

To the nearest minute

To the nearest 10 minutes

To the nearest hour

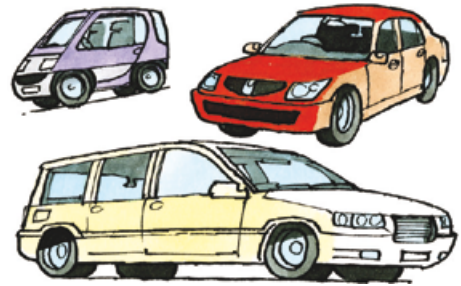
explanation 2a

explanation 2b

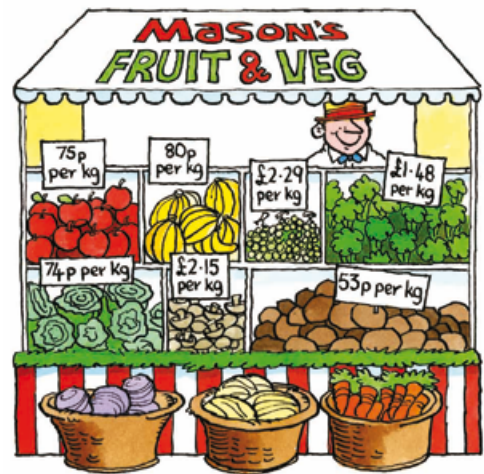
explanation 2c

- 7** Approximately how many gallons will these fuel tanks hold?
Give your answers to the nearest gallon.

- a** 55 litres
- b** 75 litres
- c** 80 litres



- 8 a** Convert these amounts to pounds. Write your answers to the nearest 0.1 lb.
- i** 1 kg **ii** 1.5 kg **iii** 500 g
- b** Convert these amounts to kilograms. Write your answers to the nearest 0.1 kg.
- i** 2 lb **ii** $5\frac{1}{2}$ lb



- c** Sharon is going shopping. This is her shopping list.

Work out how much each item would cost to the nearest penny at

- i** Greene's Grocers **ii** Mason's Fruit & Veg
- d** Sharon wants to do all her shopping at one shop.

Which shop should she choose if she wants to pay as little as possible?

1 kg bananas
2 lb mushrooms
500 g grapes
1.5 kg apples
 $5\frac{1}{2}$ lb potatoes

- 9** In an athletics competition, Rosa runs in both the mile and the 1500 metres races. Which race is longer and by how far?
Give your answer to the nearest 10 metres.