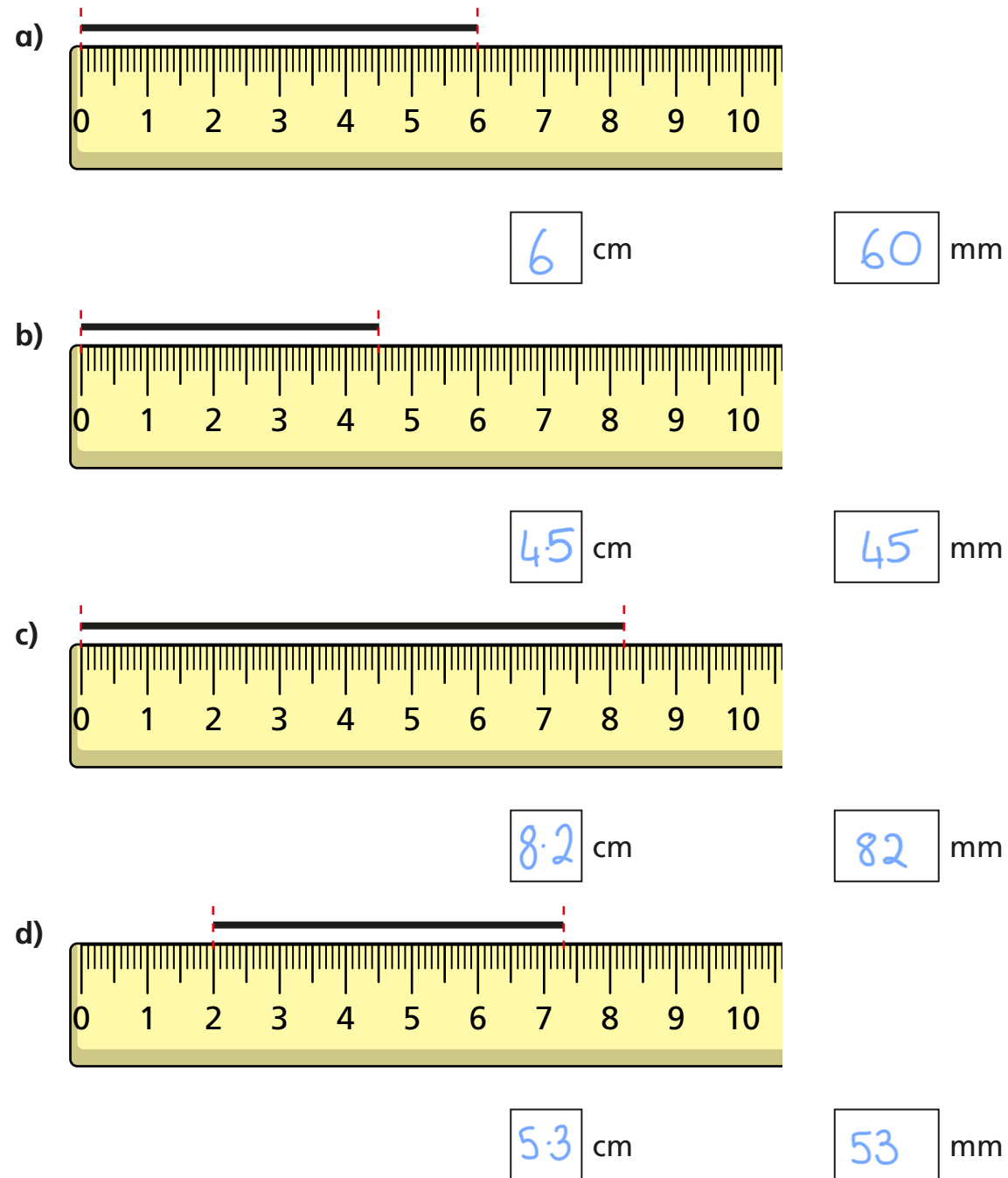


# Metric units

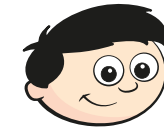
- 1 How long is each line?  
Give your answer in both centimetres and millimetres.



- 2 Complete the conversion.

$$1 \text{ cm} = \text{10} \text{ mm}$$

- 3 Dexter is converting units of measure.



If I know how many millimetres are in 1 cm, and how many centimetres are in 1 m, then I can work out how many millimetres are in 1 m.

Complete Dexter's workings to show that he is correct.

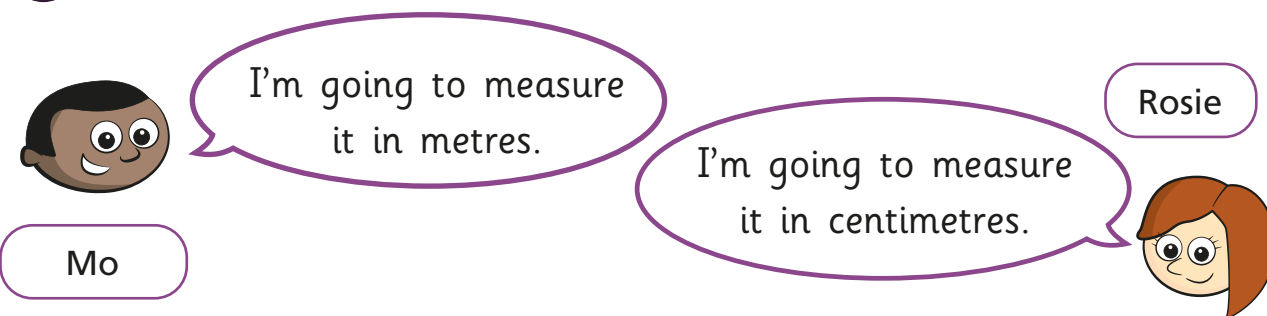
$$\begin{aligned} 1 \text{ m} &= \text{100} \text{ cm} \\ 1 \text{ cm} &= \text{10} \text{ mm} \\ \text{so, } 1 \text{ m} &= \text{1,000} \text{ mm} \end{aligned}$$

What other conversions could you work out using Dexter's method?

- 4 Complete the conversions.

a) 15 cm = <input type="text" value="150"/> mm	e) <input type="text" value="20"/> cm = 0.2 m
b) 12 m = <input type="text" value="1,200"/> cm	f) 4.65 m = <input type="text" value="465"/> cm
c) 16.5 m = <input type="text" value="1,650"/> cm	g) 52,000 mm = <input type="text" value="5,200"/> cm
d) <input type="text" value="1,650"/> mm = 165 cm	h) 52,000 mm = <input type="text" value="52"/> m

- 5 Mo and Rosie are measuring the length of the playground.



- a) Whose unit of measure is more appropriate? Mo

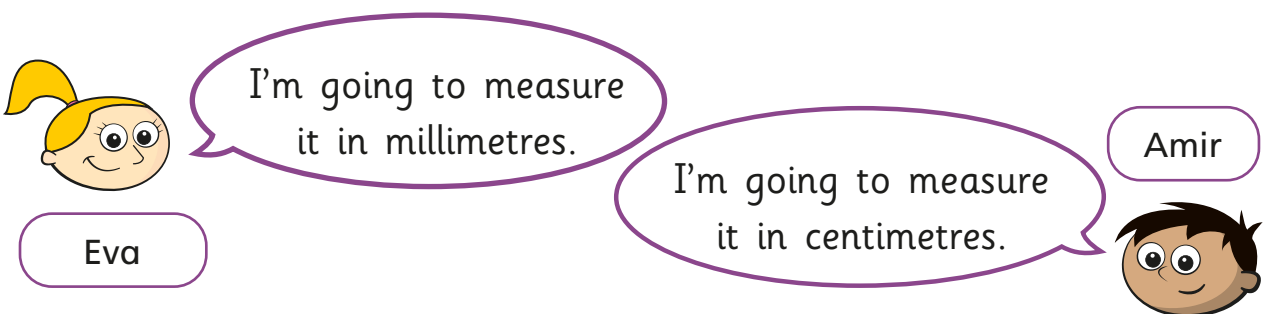
Explain your answer.

- b) Rosie has measured the length of the playground as 563 cm.

What answer will Mo get in metres?

5.63 m

- 6 Eva and Amir are measuring the length of a paper clip.



- a) Whose unit of measure is more appropriate? Eva

Explain your answer.

- b) Amir has measured the length of the paper clip as 0.8 cm.

What answer will Eva get in millimetres?

8 mm

- 7 The table shows the heights of four sunflowers.

Sunflower	A	B	C	D
Height	0.86 m	91 cm	640 mm	72 cm

Put the sunflowers in order, starting with the shortest.

C D A B

- 8 The depth of a plank is 15 mm.

12 of the planks are stacked on top of each other.

What is the depth of the stack of planks?

Give your answer in centimetres.



18 cm

- 9 Dexter is 146 cm tall.

Annie is 0.27 m shorter than Dexter.

How tall is Annie?

Give your answer in metres.

1.19 m

- 10 The thickness of a 20p coin is 2 mm.

Tommy stacks £4 worth of 20p coins on top of each other.

How tall is the stack of coins?

Give your answer in centimetres.



4 cm

# Imperial units

1

1 inch is approximately equal to 2.5 cm  
1 inch  $\approx$  2.5 cm

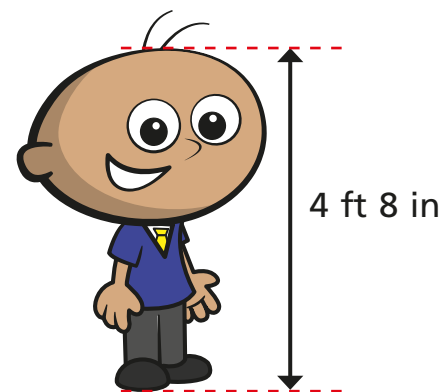
Use this fact to complete the conversions.

- a) 2 inches  $\approx$   cm      e)  inches  $\approx$  7.5 cm  
b) 4 inches  $\approx$   cm      f) 25 cm  $\approx$   inches  
c) 5 inches  $\approx$   cm      g)  inches  $\approx$  22.5 cm  
d) 0.5 inches  $\approx$   cm      h) 1 m  $\approx$   inches

2

There are 12 inches in 1 foot.  
Tommy is 4 feet 8 inches tall.

- a) What is Tommy's height in inches?



inches

- b) Approximately, how tall is Tommy in centimetres?

cm

3

1 kilogram is approximately equal to 2.2 pounds  
1 kg  $\approx$  2.2 lb

Use this fact to complete the conversions.

- a) 2 kg  $\approx$   lb      e)  kg  $\approx$  22 lb  
b) 4 kg  $\approx$   lb      f) 24.2 lbs  $\approx$   kg  
c) 5 kg  $\approx$   lb      g)  kg  $\approx$  220 lb  
d) 0.5 kg  $\approx$   lb      h) 2,500 g  $\approx$   lb

4

A dog weighs 25 kg.



- a) Approximately, what is the weight of the dog in pounds?

lb

- b) There are 14 pounds in a stone.

Approximately, what is the weight of the dog in stones and pounds?

stone  lb

5

1 pint is approximately equal to 568 millilitres  
 $1 \text{ pint} \approx 568 \text{ ml}$

Use this fact to complete the conversions.

- a) 2 pints  $\approx$   ml    e)  l  $\approx$  5 pints  
 b) 4 pints  $\approx$   ml    f) 56.8 ml  $\approx$   pints  
 c) 5 pints  $\approx$   ml    g)  pints  $\approx$  56.8 l  
 d) 0.5 pints  $\approx$   ml    h) 20 pints  $\approx$   l

6

The capacity of a barrel is 11.36 l.

- a) Approximately, what is the capacity of the barrel in pints?



pints

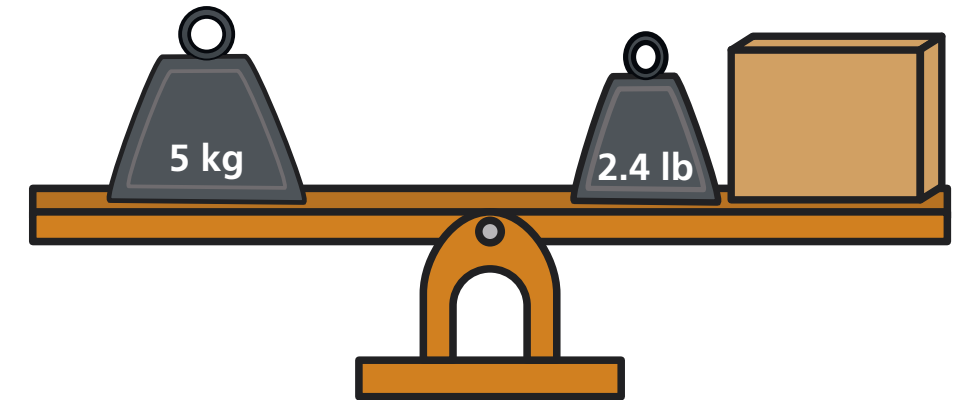
- b) There are 8 pints in a gallon.

Approximately, what is the capacity of the barrel in gallons?

gallons

7

A set of scales is balanced.



What is the weight of the box? Give your answer in pounds.

lb

8

A milkman delivers 50 pints of milk a day.

How many litres of milk does he deliver in a full week?

l

9

The average weight of a newborn baby is 7.5 lb.

Dora weighed 3.5 kg when she was born.

Did Dora weigh more or less than the average weight when she was born?

more

Approximately, how much more or less than the average did she weigh?

lb



# Converting units of time

1 Use the numbers to complete the statements.

60 52 7 12 60 24

a) There are **7** days in a week.

b) There are **24** hours in a day.

c) There are **60** minutes in an hour.

d) There are **52** weeks in a year.

e) There are **12** months in a year.

f) There are **60** seconds in a minute.

2 Tommy and Kim are completing the statement.

There are            days in a year.



The answer is 365

Tommy

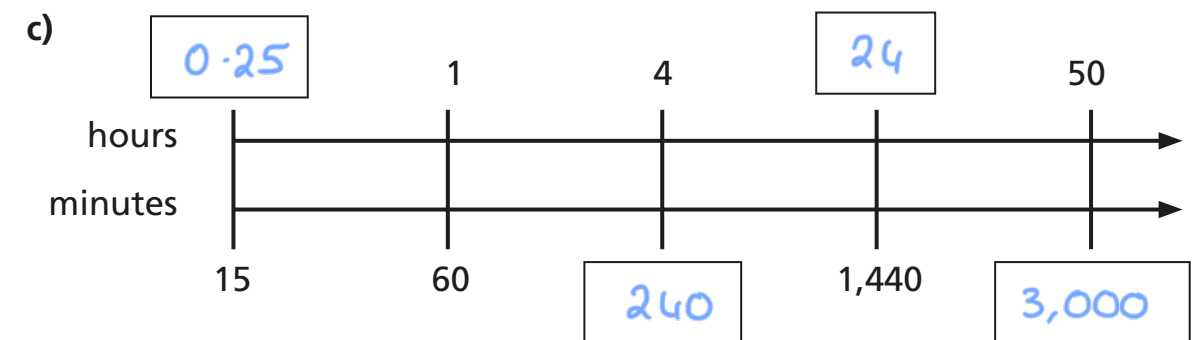
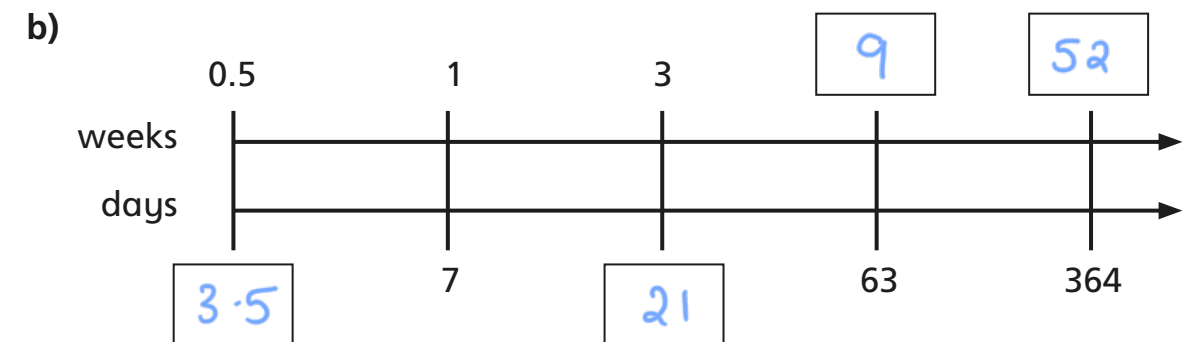
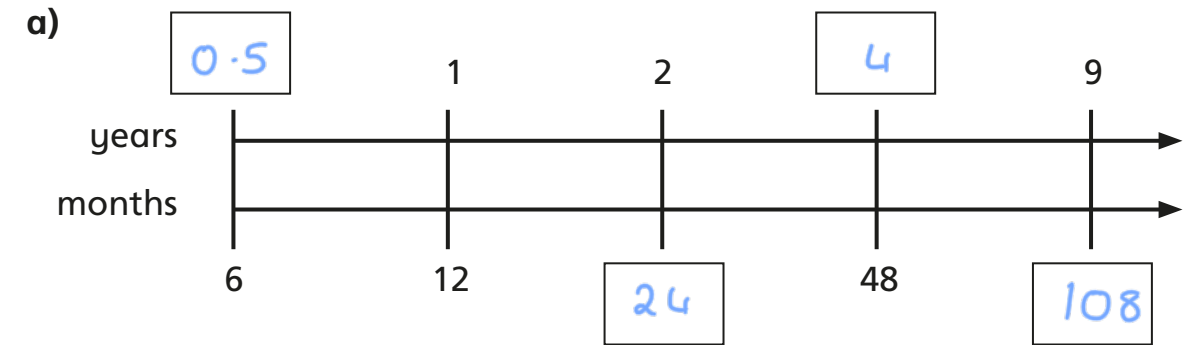
The answer is 366



Kim

Who do you agree with? **Both - depends whether it is a leap year.**  
Talk about it with a partner.

3 Fill in the boxes to complete the conversions.



4 Complete the conversions.

a) 6 weeks = **42** days

d) 3 days = **72** hours

b) 7 years = **84** months

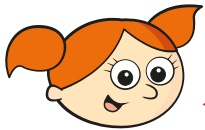
e) **14** weeks = 98 days

c) 5 minutes = **300** seconds

f) **540** minutes = 9 hours


- g)  $\boxed{60}$  hours = 2.5 days      i)  $\frac{1}{2}$  an hour =  $\boxed{30}$  minutes
- h) 18 months =  $\boxed{1.5}$  years      j)  $\boxed{45}$  seconds =  $\frac{3}{4}$  of a minute

- 5 Alex and Jack are converting 52 days into weeks.



Alex

I can't do it because 52 is not a multiple of 7



Jack

I can convert it into weeks and days.

Who is correct? Jack

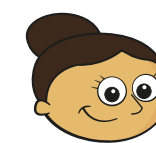
Talk about it with a partner.

- 6 Ron and Eva have known each other for 103 days.  
For how many weeks and days have they known each other?

$\boxed{14}$  weeks and  $\boxed{5}$  days

- 7 Amir and Annie ran a race.  
Amir ran the race in 3 minutes and 14 seconds.  
Annie ran the race in 187 seconds.  
Who was faster? Annie  
Show your workings.

- 8 Dora's birthday is on 17 August.



It's currently 6 pm on 14 August.



- a) How many hours is it until Dora's birthday?

$\boxed{54}$  hours

- b) How many minutes is it until Dora's birthday?

$\boxed{3,240}$  minutes

- c) How many seconds is it until Dora's birthday?

$\boxed{194,400}$  seconds

- 9 Work out how old you are in days, hours and minutes.

Various answers.

$\boxed{\phantom{000}}$  days  $\boxed{\phantom{000}}$  hours  $\boxed{\phantom{000}}$  minutes