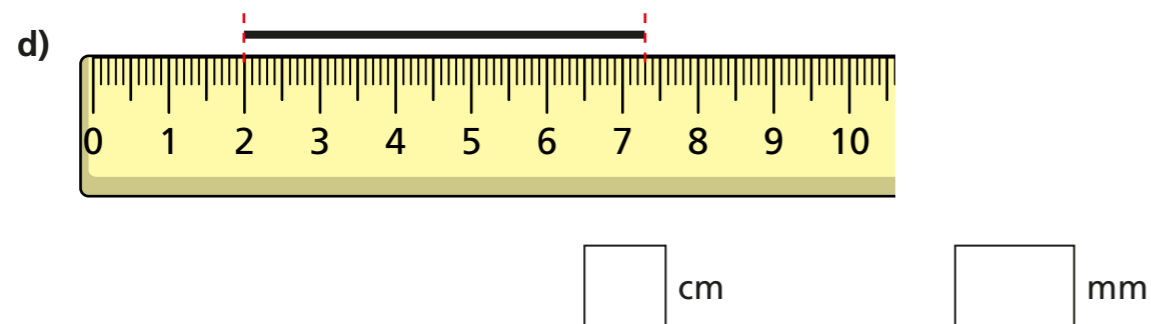# Metric units

**1** How long is each line?

Give your answer in both centimetres and millimetres.

**a)**



[ ] cm      [ ] mm

**b)**



[ ] cm      [ ] mm

**c)**



[ ] cm      [ ] mm

**d)**
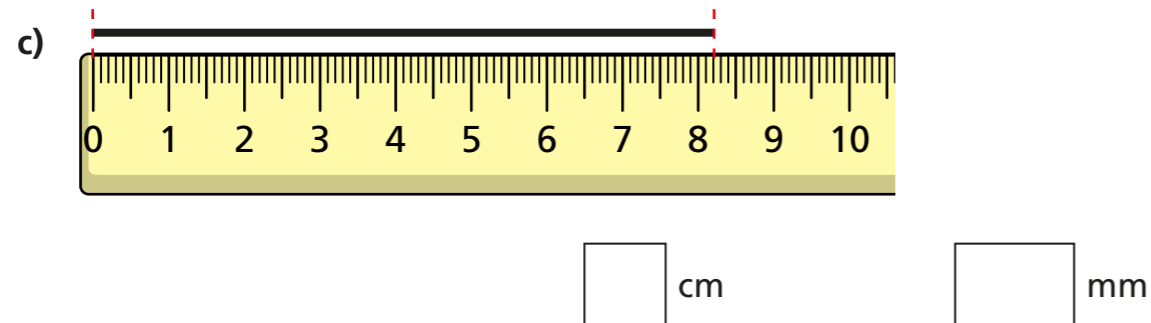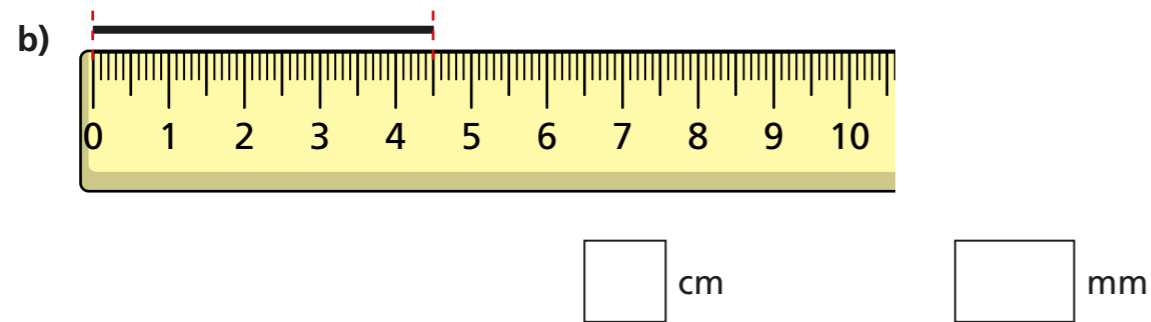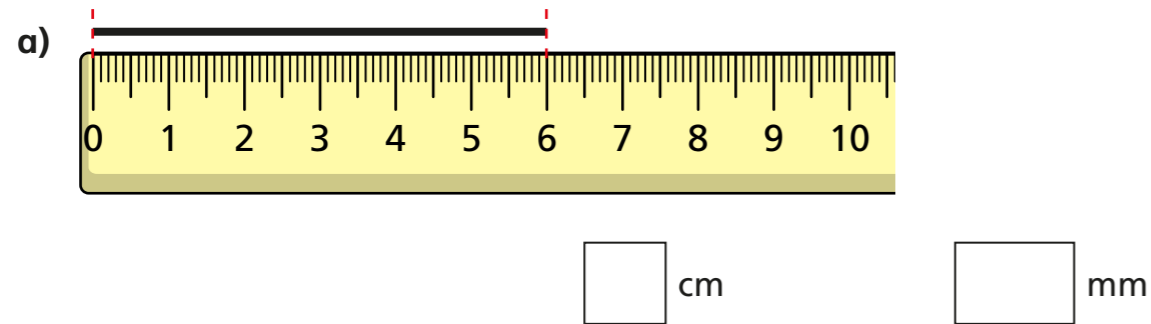


[ ] cm      [ ] mm

**2** Complete the conversion.      1 cm = [ ] 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.

1 m = [ ] cm

1 cm = [ ] mm

so, 1 m = [ ] mm

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

**4** Complete the conversions.

**a)** 15 cm = [ ] mm

**b)** 12 m = [ ] cm

**c)** 16.5 m = [ ] cm

**d)** [ ] mm = 165 cm

**e)** [ ] cm = 0.2 m

**f)** 4.65 m = [ ] cm

**g)** 52,000 mm = [ ] cm

**h)** 52,000 mm = [ ] m

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

Mo: I'm going to measure it in metres.

Rosie: I'm going to measure it in centimetres.

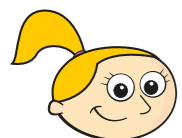a) Whose unit of measure is more appropriate? _____

Explain your answer.

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

What answer will Mo get in metres? ☐ m

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

Eva: I'm going to measure it in millimetres.

Amir: I'm going to measure it in centimetres.

a) Whose unit of measure is more appropriate? _____

Explain your answer.

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

What answer will Eva get in millimetres? ☐ 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.

_____

**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.

☐ cm

**9** Dexter is 146 cm tall.

Annie is 0.27 m shorter than Dexter.

How tall is Annie?

Give your answer in metres.

☐ 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.

☐ cm

# Imperial units

**1**
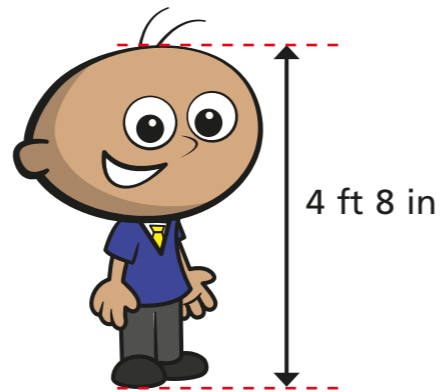
1 inch is approximately equal to 2.5 cm

1 inch ≈ 2.5 cm

Use this fact to complete the conversions.

**a)** 2 inches ≈ [ ] cm

**b)** 4 inches ≈ [ ] cm

**c)** 5 inches ≈ [ ] cm

**d)** 0.5 inches ≈ [ ] cm

**e)** [ ] inches ≈ 7.5 cm

**f)** 25 cm ≈ [ ] inches

**g)** [ ] inches ≈ 22.5 cm

**h)** 1 m ≈ [ ] inches

**2** There are 12 inches in 1 foot.

Tommy is 4 feet 8 inches tall.

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

4 ft 8 in

[ ] inches

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

[ ] cm

**3**

1 kilogram is approximately equal to 2.2 pounds

1 kg ≈ 2.2 lb

Use this fact to complete the conversions.

**a)** 2 kg ≈ [ ] lb

**b)** 4 kg ≈ [ ] lb

**c)** 5 kg ≈ [ ] lb

**d)** 0.5 kg ≈ [ ] lb

**e)** [ ] kg ≈ 22 lb

**f)** 24.2 lbs ≈ [ ] kg

**g)** [ ] kg ≈ 220 lb

**h)** 2,500 g ≈ [ ] lb

**4** A dog weighs 25 kg.

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 pint ≈ 568 ml

Use this fact to complete the conversions.

**a)** 2 pints ≈ ⬚ ml   **e)** ⬚ l ≈ 5 pints

**b)** 4 pints ≈ ⬚ ml   **f)** 56.8 ml ≈ ⬚ pints

**c)** 5 pints ≈ ⬚ ml   **g)** ⬚ pints ≈ 56.8 l

**d)** 0.5 pints ≈ ⬚ ml   **h)** 20 pints ≈ ⬚ l

**6** The capacity of a barrel is 11.36 l.

**a)** Approximately, what is the capacity of the barrel in pints?
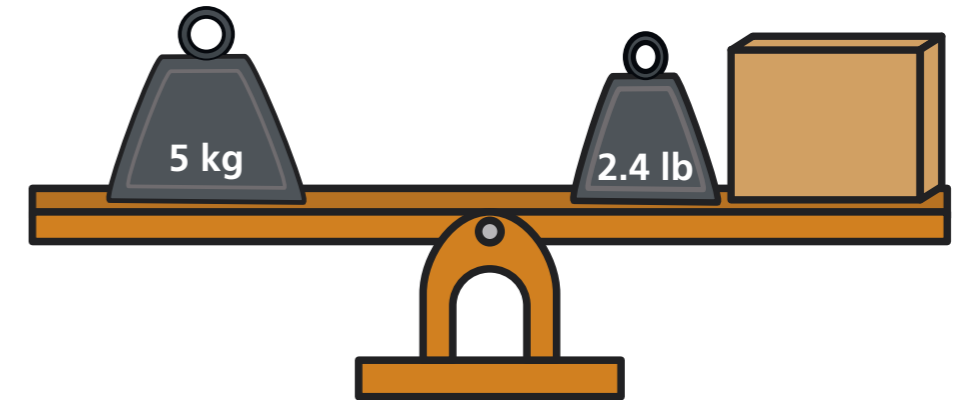
11.36 litres

⬚ 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.

5 kg    2.4 lb

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?  _____

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 ☐ days in a week.

b) There are ☐ hours in a day.

c) There are ☐ minutes in an hour.

d) There are ☐ weeks in a year.

e) There are ☐ months in a year.

f) There are ☐ seconds in a minute.

**2** Tommy and Kim are completing the statement.

> There are     days in a year.
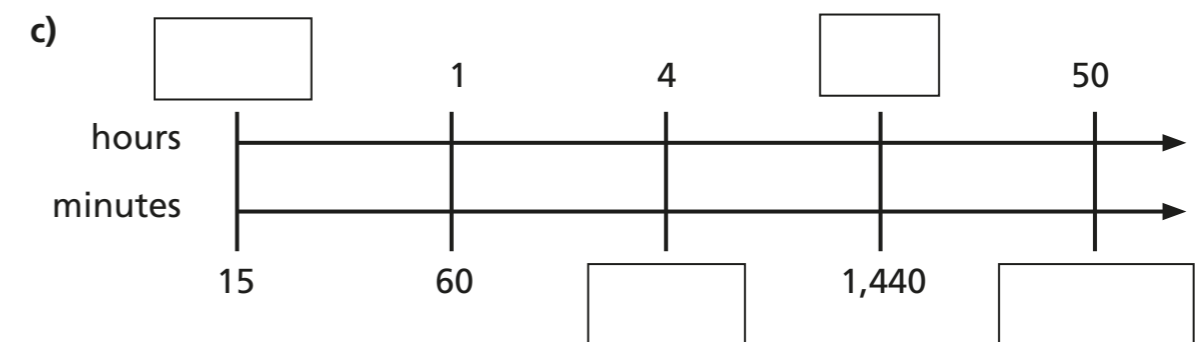
Tommy: The answer is 365

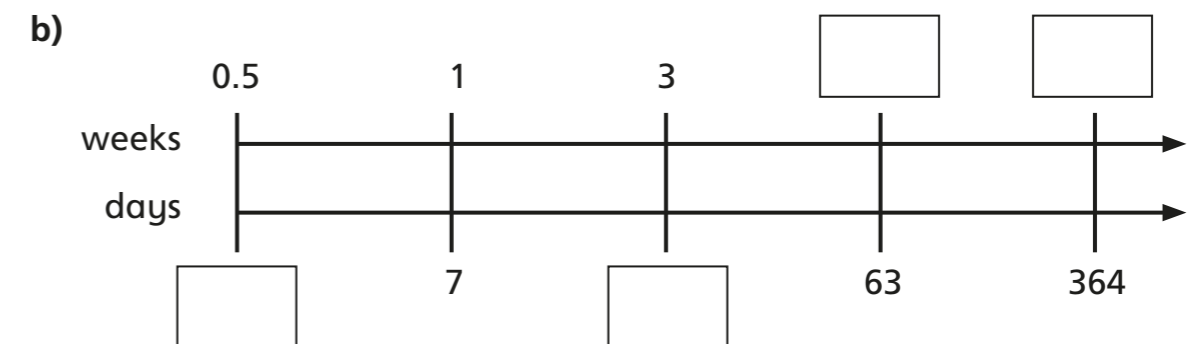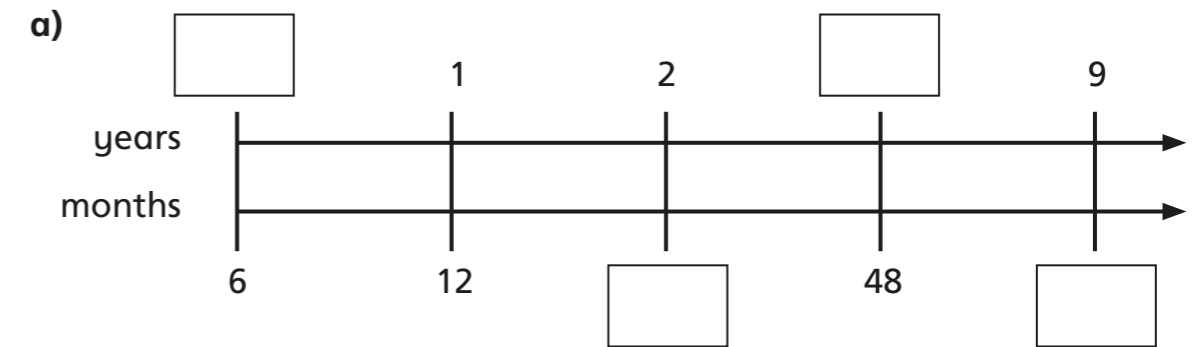Kim: The answer is 366

Who do you agree with? _____

Talk about it with a partner.

**3** Fill in the boxes to complete the conversions.

a)

years: ☐, 1, 2, ☐, 9
months: 6, 12, ☐, 48, ☐

b)

weeks: 0.5, 1, 3, ☐, ☐
days: ☐, 7, ☐, 63, 364

c)

hours: ☐, 1, 4, ☐, 50
minutes: 15, 60, ☐, 1,440, ☐
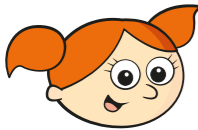
**4** Complete the conversions.

a) 6 weeks = ☐ days

b) 7 years = ☐ months

c) 5 minutes = ☐ seconds

d) 3 days = ☐ hours

e) ☐ weeks = 98 days

f) ☐ minutes = 9 hours

**g)** ☐ hours = 2.5 days    **i)** $\frac{1}{2}$ an hour = ☐ minutes

**h)** 18 months = ☐ years    **j)** ☐ seconds = $\frac{3}{4}$ of a minute

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

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

Alex

*I can convert it into weeks and days.*
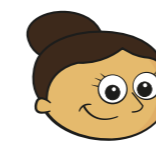
Jack

Who is correct? _____

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?

☐ weeks and ☐ 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? _____

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?

☐ hours

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

☐ minutes

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

☐ seconds

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

☐ days ☐ hours ☐ minutes

# Timetables

**1** Here is a bus timetable.

|  | Bus A | Bus B | Bus C |
|---|---|---|---|
| Green Park Road | 08:45 | 09:00 | 09:15 |
| Forrest Drive | 09:05 | 09:20 | 09:35 |
| Summerville Street | 09:22 | 09:37 | 09:52 |
| Penny Bridge | 09:40 | 09:55 |  |

**a)** What time does Bus A arrive at Green Park Road?

**b)** What time does Bus B arrive at Summerville Street?

**c)** What time does Bus C arrive at Forrest Drive?

**d)** Each bus takes the same amount of time to get from Green Park Road to Penny Bridge.

What time does Bus C arrive at Penny Bridge?

**e)** Eva needs to be at Summerville Street by 9:35

Which bus does she need to get from Green Park Road?

**2** Here is an extract from a TV guide.

| 17:00 | 17:30 | 18:00 | 18:30 | 19:00 | 19:30 | 20:00 |
|---|---|---|---|---|---|---|
| News | Catch It! | Giant George | Wilson Street | | News | Detective Files |

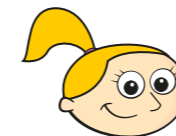**a)** At what times is the news on? [ ] and [ ]

**b)** What time does *Detective Files* start? [ ]

**c)** How long is *Wilson Street* on for? _____

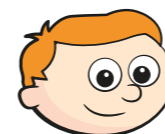**d)** Eva is working out how long *Catch It!* is on for. Here are her workings.

> *Catch It!* is on for 85 minutes.

$$
\begin{array}{cccc}
 & 7 & & 9 \\
1 & \cancel{8} : \cancel{^1 0} & {^1 0} \\
- \quad 1 & 7 : 1 & 5 \\
\hline
0 & 0 : 8 & 5 \\
\end{array}
$$

Do you agree with Eva? _____
Talk about it with a partner.

**e)**

> The news is on for half an hour in total.

Do you agree with Ron? _____
Explain your answer.

**3** Here is part of a train timetable.

| | | | | | |
|---|---|---|---|---|---|
| St Pancras | 06:25 | 06:40 | 06:55 | 07:05 | 07:22 |
| Stratford | 06:32 | 06:47 | 07:02 | 07:12 | 07:29 |
| Ebbsfleet | 06:43 | 06:59 | 07:15 | 07:23 | 07:40 |
| Ashford | —— | 07:19 | —— | 07:42 | —— |
| Gravesend | 06:47 | —— | 07:18 | —— | 07:43 |

**a)** How many of the trains go all the way from St Pancras to Gravesend?

**b)** How long does the 06:40 take to get from St Pancras to Ashford?

minutes

**c)** Which train takes the least amount of time to get from St Pancras to Gravesend?

_____

**4** In this timetable, all the trains stop at every station and the time taken between stations does not change.

Fill in the missing information.

| | | | | |
|---|---|---|---|---|
| Aberford | 08:30 | 11:00 | 13:10 | |
| Cartown | | 11:22 | | |
| Donville | | | 13:47 | |
| Highborough | | | 14:01 | |
| Southland | 09:57 | | | 16:03 |

**5** Draw a timetable of your school day.

**a)** How many minutes do you spend at school?

minutes

**b)** How many seconds do you have for your lunch break?

seconds

**c)** Write your own questions for a partner to answer about your timetable.

_____

_____

_____

**d)** Work with a partner to create your timetable for the rest of the week.

Work out how many hours, minutes and days you spend on each subject.