Year 5 maths answers W/B 13.7.2020

Metric units

White Rose Maths

1 How long is each line?

Give your answer in both centimetres and millimetres.

a)

| 6 | cm | 60 | mm |

b)

| 4.5 | cm | 45 | mm |

c)

| 8.2 | cm | 82 | mm |

d)

| 5.3 | cm | 53 | mm |
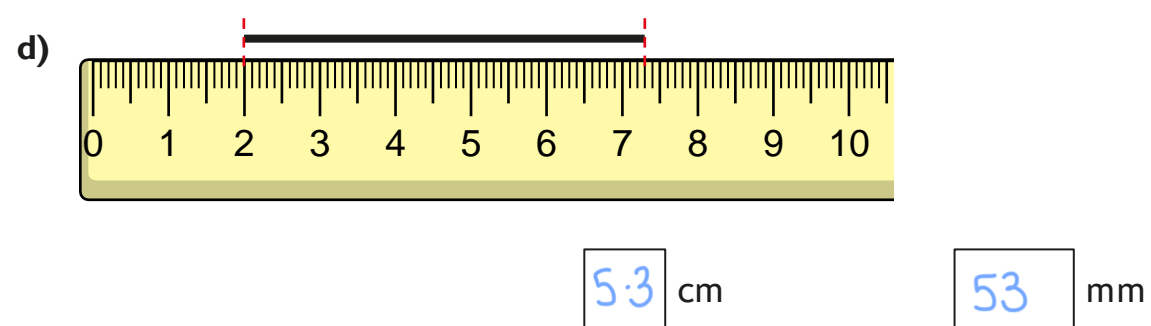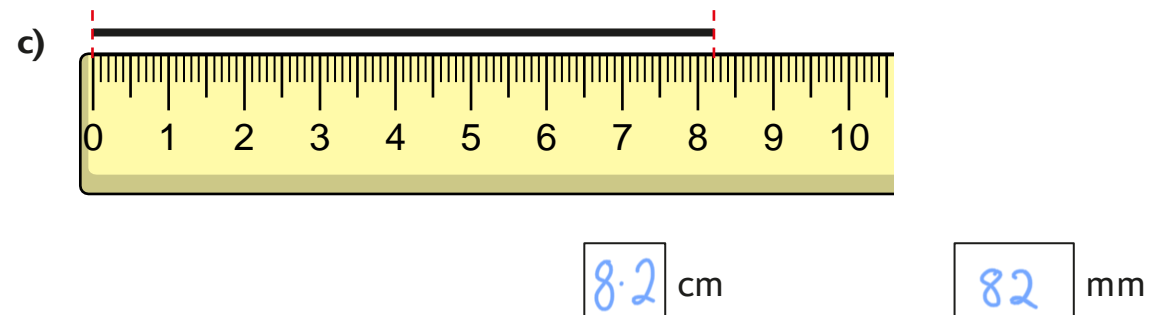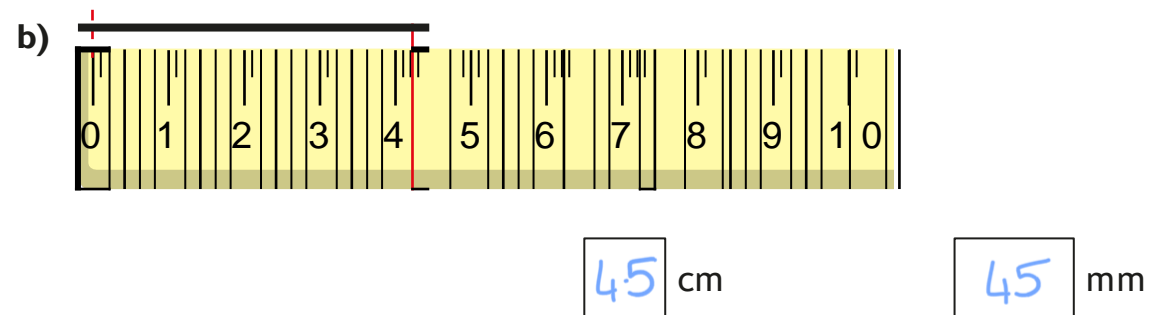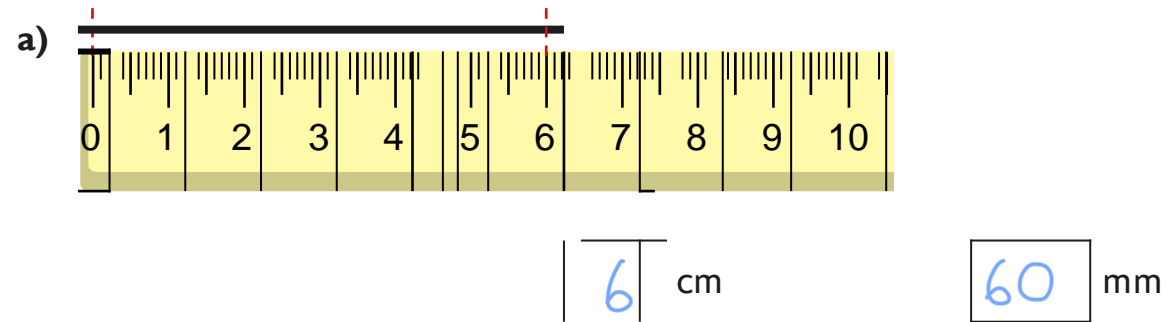
2 Complete the conversion.

1 cm = | 10 | 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 = | 100 | cm

1 cm = | 10 | mm

so, 1 m = | 1,000 | mm

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

4 Complete the conversions.

a) 15 cm = | 150 | mm   e) | 20 | cm = 0.2 m

b) 12 m = | 1,200 | cm   f) 4.65 m = | 465 | cm

c) 16.5 m = | 1,650 | cm   g) 52,000 mm = | 5,200 | cm

d) | 1,650 | mm = 165 cm   h) 52,000 mm = | 52 | m

© White Rose Maths 2020

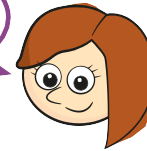**5** Mo and Rosie are measuring the length of the playground.

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

Rosie: I'm going to measure it in centimetres.
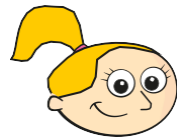
a) Whose unit of measure is more appropriate? __Mo__

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.

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? __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.
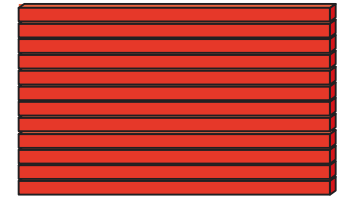
__18__ cm

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

White Rose Maths

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 ≈ **5** cm

e) **3** inches ≈ 7.5 cm

b) 4 inches ≈ **10** cm

f) 25 cm ≈ **10** inches

c) 5 inches ≈ **12·5** cm

g) **9** inches ≈ 22.5 cm

d) 0.5 inches ≈ **1·25** cm

h) 1 m ≈ **40** 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
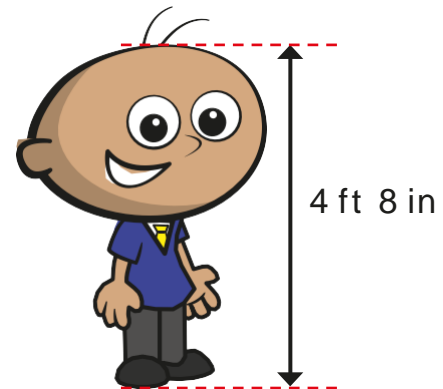
56 inches

b) Approximately, how tall is Tommy in centimetres?

140 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 ≈ **4·4** lb

e) **10** kg ≈ 22 lb

b) 4 kg ≈ **8·8** lb

f) 24.2 lbs ≈ **11** kg

c) 5 kg ≈ **11** lb

g) **100** kg ≈ 220 lb

d) 0.5 kg ≈ **1·1** lb

h) 2,500 g ≈ **5·5** lb

4 A dog weighs 25 kg.

25 kg

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

55 lb

b) There are 14 pounds in a stone.

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

3 stone **13** lb

5

> 1 pint is approximately equal to 568 millilitres
>
> 1 pint ≈ 568 ml

Use this fact to complete the conversions.

a) 2 pints ≈ `1,136` ml **e)** `2.84` l ≈ 5 pints

b) 4 pints ≈ `2,272` ml **f)** 56.8 ml ≈ `0.1` pints

c) 5 pints ≈ `2,840` ml **g)** `100` pints ≈ 56.8 l

d) 0.5 pints ≈ `284` ml **h)** 20 pints ≈ `11.36` l

6 The capacity of a barrel is 11.36 l.

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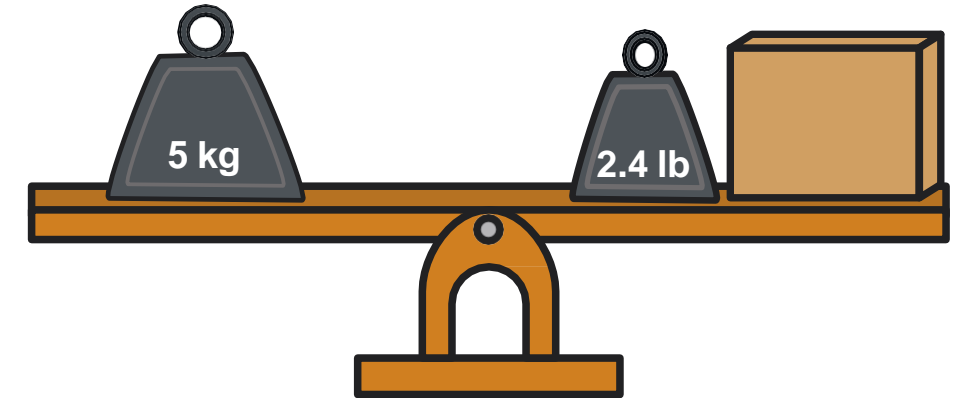
11.36 litres

`20` pints

b) There are 8 pints in a gallon.

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

`2.5` 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.

`8.6` lb

8 A milkman delivers 50 pints of milk a day.

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

`198.8` 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?

`0.2` lb

Converting units of time

White Rose Maths

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.
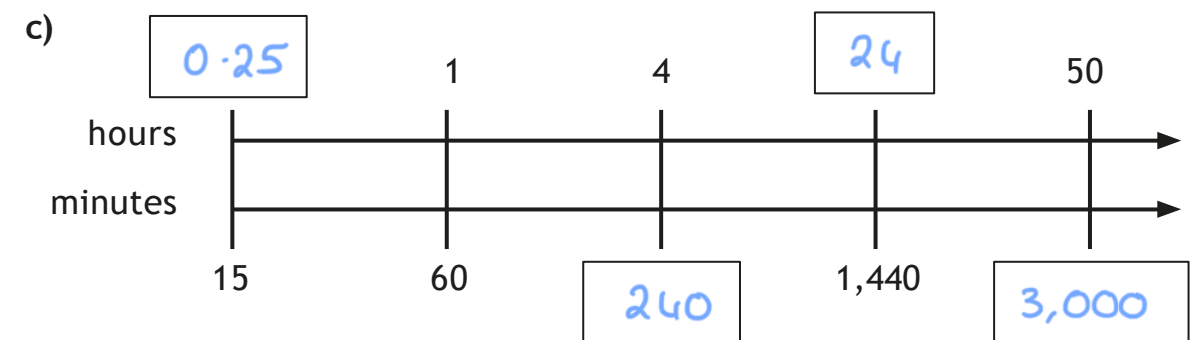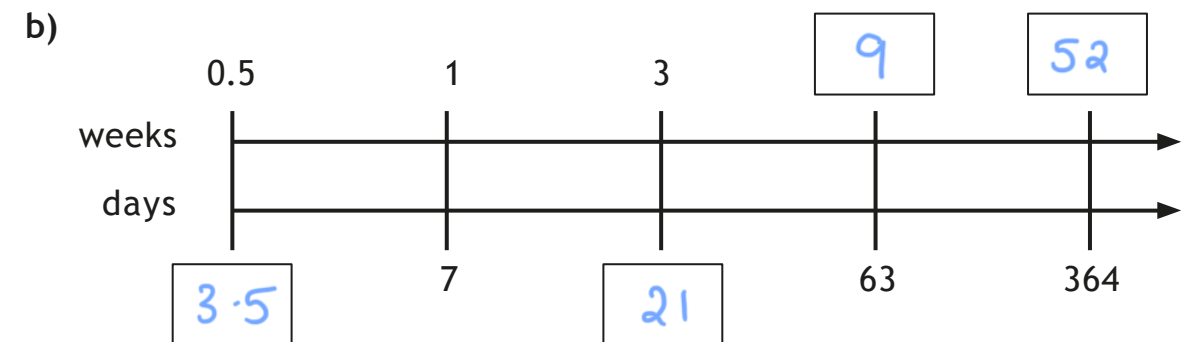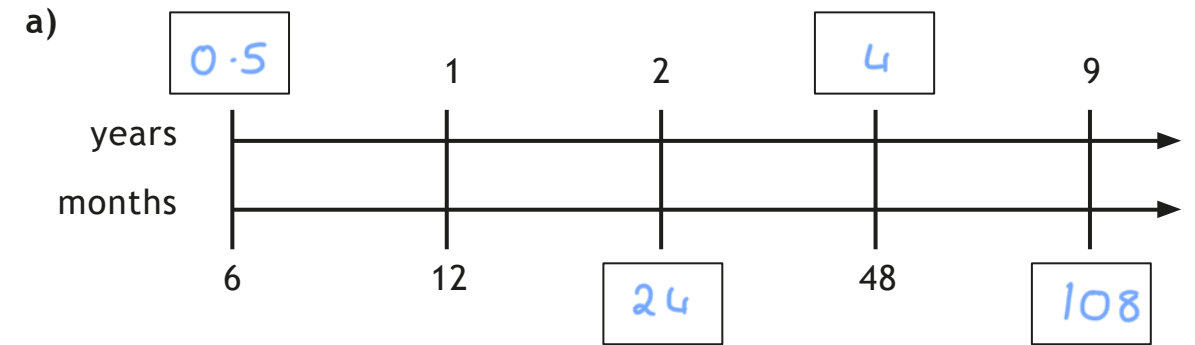
There are _____ days in a year.

Tommy: The answer is 365

Kim: The answer is 366

Who do you agree with? _Both - depends whether_
Talk about it with a partner. _it is a leap year._

3 Fill in the boxes to complete the conversions.

a)

years: **0·5**, 1, 2, **4**, 9

months: 6, 12, **24**, 48, **108**

b)

weeks: 0.5, 1, 3, **9**, **52**

days: **3·5**, 7, **21**, 63, 364

c)

hours: **0·25**, 1, 4, **24**, 50

minutes: 15, 60, **240**, 1,440, **3,000**

4 Complete the conversions.

a) 6 weeks = **42** days

b) 7 years = **84** months

c) 5 minutes = **300** seconds

d) 3 days = **72** hours

e) **14** weeks = 98 days

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.
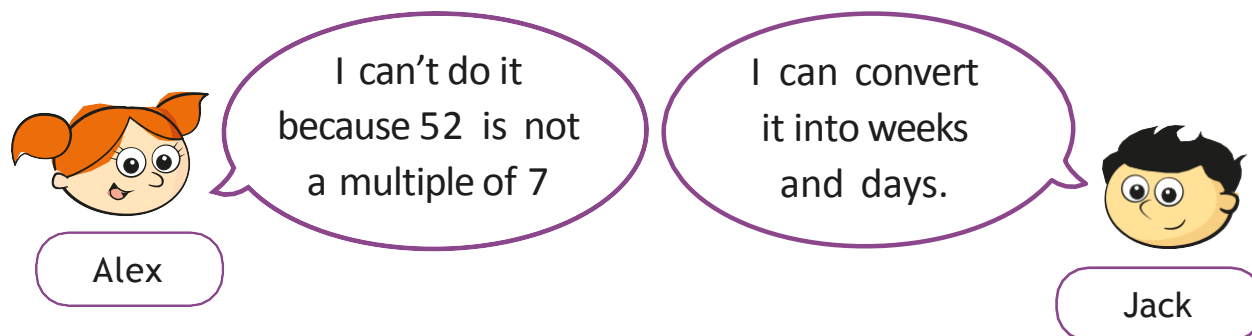
Who is correct? __Jack__
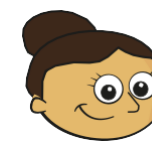
Talk about it with a partner.

---

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.

$\boxed{}$ days $\boxed{}$ hours $\boxed{}$ 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?   `08:45`

b) What time does Bus B arrive at Summerville Street?   `09:37`

c) What time does Bus C arrive at Forrest Drive?   `09:35`

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?

`10:10`

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

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

`08:45`

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

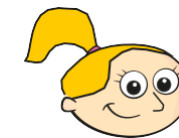**a)** At what times is the news on?   `17:00` and `19:15`

b) What time does *Detective Files* start?   `19:30`

c) How long is *Wilson Street* on for? ___`1 hour`___

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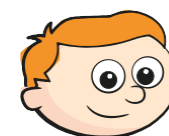
Here are her workings.

Catch it! is on for 85 minutes.

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

Do you agree with Eva? ___`No`___

Talk about it with a partner.

e)

The news is on for half an hour in total.

Do you agree with Ron? __`Yes`__

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 times 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

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.

Find the missing values on the double number line.

	½	1	2	2.5	4.5
kg					
g	500	1,000	2,000	2,500	4,500
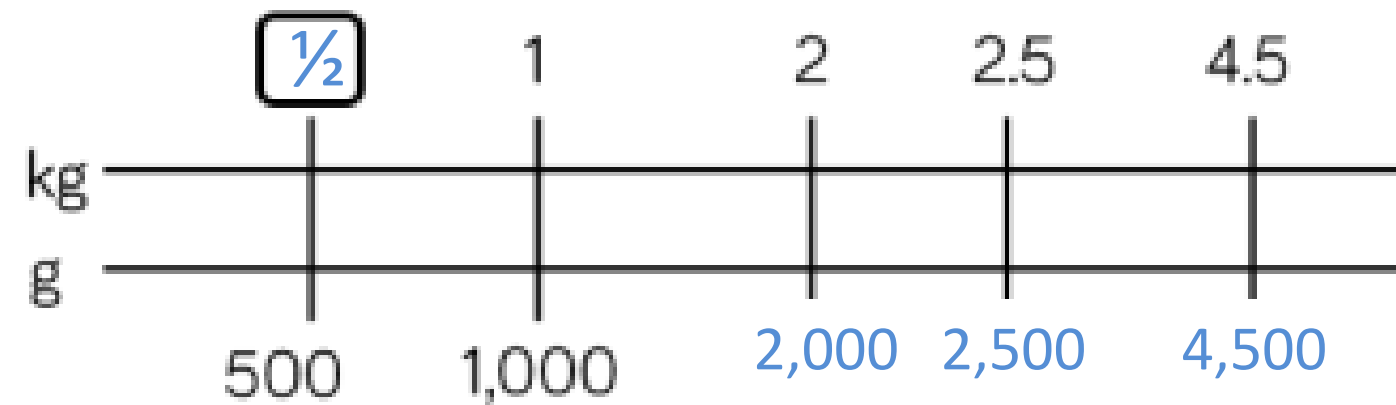
Write your conversions as sentences.

Complete the missing information.

$\frac{1}{10}$ kilogram = [100] grams

$\frac{3}{10}$ km = [300] metres

7 kg + $\frac{1}{4}$ kg = [7250] g

12 km + [½] km = 12,500 m

Compare the measurements using <, > or =

5 kg (>) 4,500 g

12 kg (=) 12,000 g

3.7 km (>) 370 m

37,000 m (>) 3.7 km

3

Cola is sold in bottles and cans.

330 ml
48 p

1.25 litres
£1.59

Alex buys 5 cans and 3 bottles.
She sells the cola in 100 ml glasses.
She sells all the cola.
How many glasses does she sell?

Alex charges 50 p per glass.
How much profit does she make?

Alex sells 54 glasses.

Alex makes £19.83 profit.

Ribbon is sold in 225 mm pieces.
Teddy needs 5 metres of ribbon.
How many pieces does he need to buy?

Teddy would like to make either a bookmark or a rosette with his left over ribbon. Which can he make?

To make 5 bookmarks you will need:
1.2 metres of ribbon
1 pair of scissors

To make 1 mini rosette you will need:
4 pieces of ribbon cut to 35 mm
A stapler

Teddy buys 23 pieces of ribbon.

Teddy will have 175 mm left over.

A bookmark needs 240 mm, and a rosette needs 140 mm so he can make the rosette.