



W.C.13thth July 2020

<https://www.bbc.co.uk/bitesize/tags/zhgppg8/year-5-lessons/1>

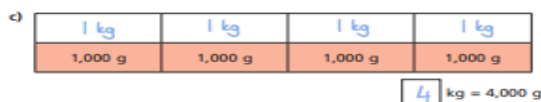
Maths ANSWERS

Monday

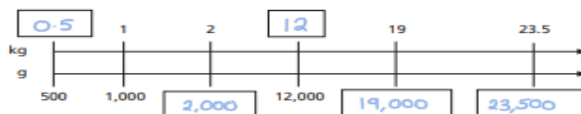
Kilograms and kilometres

Rose Maths

- 1 The bar model shows that 1 kg is equal to 1,000 g. Use the bar models to complete the conversions.



- 2 Fill in the missing values to convert between kilograms and grams.



- 5 Complete the conversions.

- a) 18 kg = 18,000 g
 b) 18 km = 18,000 m
 c) 21,000 g = 21 kg
 d) 32,500 m = 32.5 km
 e) 11.5 km = 11,500 m
 f) 41,200 g = 41.2 kg
 g) 100 g = 0.1 kg
 h) 100 km = 100,000 m

- 6 Complete the conversions.

- a) $\frac{1}{2}$ kg = 500 g
 $\frac{1}{4}$ kg = 250 g
 $\frac{3}{4}$ kg = 750 g
 b) $\frac{1}{10}$ km = 100 m
 $\frac{1}{5}$ km = 200 m
 $\frac{3}{10}$ km = 300 m
 c) $\frac{3}{6}$ kg = 500 g
 $\frac{12}{24}$ kg = 500 g
 $\frac{99}{198}$ kg = 500 g
 d) $\frac{20}{20}$ km = 1,000 m
 $\frac{1}{20}$ km = 50 m
 $\frac{19}{20}$ km = 950 m

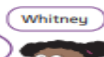
- 7 Write <, > or = to compare the measurements.

- a) 0.5 km < 600 m
 b) 3.7 kg > 3,200 g
 c) 5,000 g + 2 kg = 5.5 kg + 1,500 g
 d) $\frac{7}{10}$ km + $\frac{3}{10}$ km + 965 m > 817 m + 1 km

- 3 Dexter and Whitney are converting 27.5 kg into grams.



I'm going to use bar models.



I'm going to use a double number line.

Whose method is more efficient? Whitney
 Explain your answer.

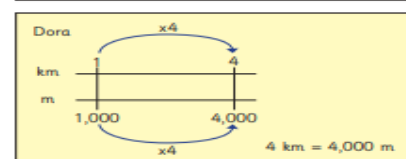
- b) Complete the conversion. 27.5 kg = 27,500 g

- 4 Tommy and Dora are converting 4 km into metres. Here are their workings.

Tommy

1 km	1 km	1 km	1 km
1,000m	1,000m	1,000m	1,000m

4 km = 4,000 m



Whose method do you prefer? Various
 Explain your answer.

- 8 A bag of apples weighs 600 g.

How much do 8 bags of apples weigh?
 Give your answer in kilograms.



- 9 Ron buys 3.8 kg of potatoes and 1,250 g of carrots.

He pays with a £20 note.
 How much change does he get?

$$3.8 \text{ kg} = 3,800 \text{ g} = 38 \times 100 \text{ g}$$

$$38 \times 26 \text{p} = \text{£}9.88$$

$$1,250 \text{ g} = 1.25 \text{ kg}$$

$$1.25 \times \text{£}1.24 = \text{£}1.55$$

$$\text{£}20 - (\text{£}9.88 + \text{£}1.55) = \text{£}8.57$$



£ 8.57

- 10 Dora runs 200 m in 32 seconds.

If she runs at the same speed, how long will it take her to run 5 km?



Is Dora likely to be able to keep up this speed?

Millimetres and millilitres

White
Rose
Maths

- 1 The bar model shows that 1 m is equal to 1,000 mm.

Use the bar models to complete the conversions.

1 m
1,000 mm

1 m	1 m	1 m	1 m	1 m	1 m
1,000 mm	1,000 mm	1,000 mm	1,000 mm	1,000 mm	1,000 mm

$$6 \text{ m} = 6,000 \text{ mm}$$

1 m	1 m	1 m
1,000 mm	1,000 mm	1,000 mm

$$3 \text{ m} = 3,000 \text{ mm}$$

1 m	1 m	1 m	1 m	1 m
1,000 mm	1,000 mm	1,000 mm	1,000 mm	1,000 mm

$$5 \text{ m} = 5,000 \text{ mm}$$

- 2 Fill in the missing values to convert between metres and millimetres.



1 l	1 l	1 l	1 l
1,000 ml	1,000 ml	1,000 ml	1,000 ml

$$4 \text{ l} = 4,000 \text{ ml}$$

1 l	1 l	1 l	0.5 l
1,000 ml	1,000 ml	1,000 ml	500 ml

$$3.5 \text{ l} = 3,500 \text{ ml}$$

- Complete the conversions.

a) $15 \text{ m} = 15,000 \text{ mm}$

e) $11.05 \text{ m} = 11,050 \text{ mm}$

b) $15 \text{ l} = 15,000 \text{ ml}$

f) $71,250 \text{ ml} = 71.25 \text{ l}$

c) $63,000 \text{ ml} = 63 \text{ l}$

g) $100 \text{ mm} = 0.1 \text{ m}$

d) $47,500 \text{ mm} = 47.5 \text{ m}$

h) $100 \text{ l} = 100,000 \text{ ml}$

- Eva wants to go on a ride at a theme park.



I am 1,010 mm tall.



Can Eva go on the ride? NO

Explain your answer.

- 3 Alex and Jack are converting 3.5 m into millimetres.



I'm going to use bar models.

Alex



I'm going to use a double number line.

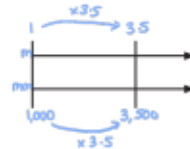
Jack

- a) Complete both methods to show that they get the same answer.

Annie's method

1 m	1 m	1 m	0.5 m
1,000 mm	1,000 mm	1,000 mm	500 mm

Jack's method



- b) Complete the conversion.

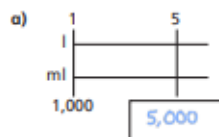
$$3.5 \text{ m} = 3,500 \text{ mm}$$

- c) Whose method do you prefer? various

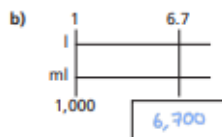
Explain your answer.

- 4 Use the information to complete the representations and conversions.

$$1 \text{ litre} = 1,000 \text{ ml}$$



$$5 \text{ l} = 5,000 \text{ ml}$$



$$6.7 \text{ l} = 6,700 \text{ ml}$$

- 7 Write <, > or = to compare the measurements.

a) $\frac{2}{5} \text{ km} < 600 \text{ m}$

b) $\frac{9}{10} \text{ l} + 100 \text{ ml} = 1,000 \text{ ml}$

c) $0.8 \text{ km} - 300 \text{ m} < \frac{7}{10} \text{ km}$

d) $\frac{1}{5} \text{ l} + 200 \text{ ml} + \frac{4}{5} \text{ ml} < \frac{1}{4} \text{ l} + 1 \text{ l}$

- 8 A piece of string is 2.76 m long.

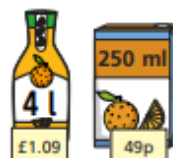
How many 30 mm pieces can be cut from the string?

$$92 \text{ pieces}$$

- 9 Orange juice is sold in bottles and cartons.

- a) Which is better value, the carton or the bottle? bottle

Explain your answer.



- b) Dexter buys 12 cartons and 5 bottles of juice. (23 litres)

He pours them into glasses with 200 ml of juice in each glass. (115 glasses)

He sells each glass of juice for 40p. (£46)

He sells all the glasses of juice.

How much profit does he make?

$$12 \times 49p + 5 \times £1.09 = £11.33$$

$$£46 - £11.33 = £34.67$$

$$£34.67$$

Imperial units

White
Rose
Maths

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?



inches

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

cm

5

1 pint is approximately equal to 568 millilitres
1 pint = 568 ml

Use this fact to complete the conversions.

- a) 2 pints = ml
b) 4 pints = ml
c) 5 pints = ml
d) 0.5 pints = ml
e) l = 5 pints
f) 56.8 ml = pints
g) pints = 56.8 l
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?



pints

- b) There are 8 pints in a gallon.

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

gallons

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.



- 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

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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.

- g) 60 hours = 2.5 days i) $\frac{1}{2}$ an hour = 30 minutes
 h) 18 months = 1.5 years j) 45 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

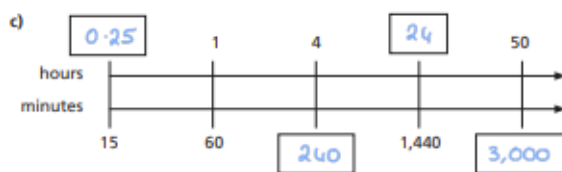
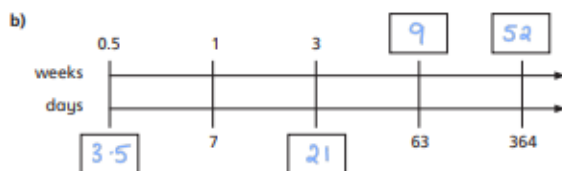
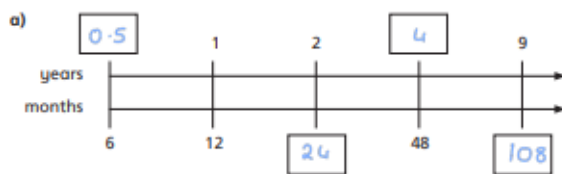
Who is correct? Jack
 Talk about it with a partner.

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

14 weeks and 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.

- 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

- 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?

54 hours

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

3,240 minutes

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

194,400 seconds

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

Various answers.

 days hours minutes

Thursday

- 3 Here is part of a train timetable.

	06:25	06:40	06:55	07:05	07:22
St Pancras					
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? 3
- b) How long does the 06:40 take to get from St Pancras to Ashford?

39 minutes

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

07:22

- 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.

	08:30	11:00	13:10	14:36
Aberford				
Cartown	08:52	11:22	13:32	14:58
Donville	09:07	11:37	13:47	15:13
Highborough	09:21	11:51	14:01	15:27
Southland	09:57	12:27	14:37	16:03

- 5 Draw a timetable of your school day. *Various answers.*

- 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.

Timetables

Rose Maths

- 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.

$$\begin{array}{r}
 79 \\
 18:00 - 17:25 \\
 \hline
 00:35
 \end{array}$$



Catch it! is on for 85 minutes.

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.

Maths Riddles

|Answers:

1. One, only the man is going to the fair!
2. 70 minutes is the same as 1 hour 10mins
3. There are no stairs!
4. Glass
5. There aren't any more, all are accounted for.

1. **14 Total Squares** ([detailed explanation](#))

2. **Lucy is 37** ([detailed explanation](#))

8. **87 (flip the image upside down)** - ([detailed explanation](#))