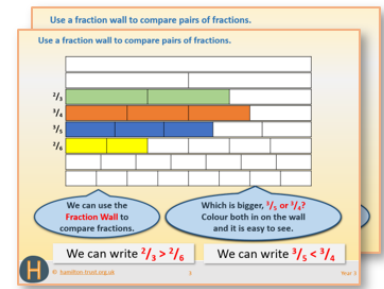


Week 14, Day 5

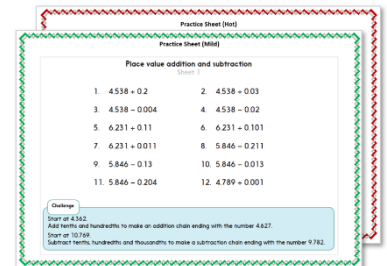
Know some imperial units and approximate metric equivalents

Each day covers one maths topic. It should take you about 1 hour or just a little more.

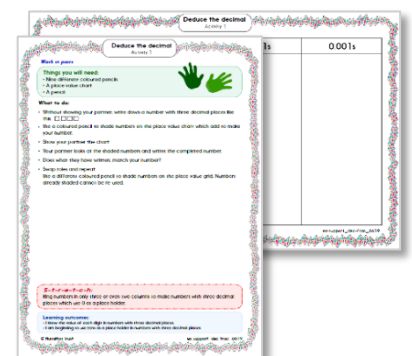
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



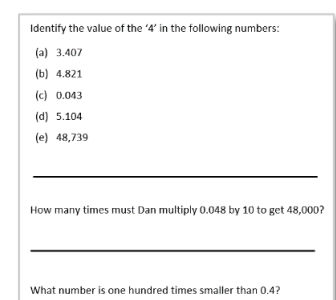
2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**



4. Have I mastered the topic? A few questions to **Check your understanding**. Fold the page to hide the answers!



Learning Reminders

Know regularly used imperial units and approximate metric equivalents; covert between units.

Imperial units

pints **pounds** stones ounces
feet inches **yards**

These are some of the imperial units we still hear being used.

Some bags of crisps weigh 28 grams, a very strange number but this is because there were originally '1-ounce' packets.
28g is approximately 1 ounce.

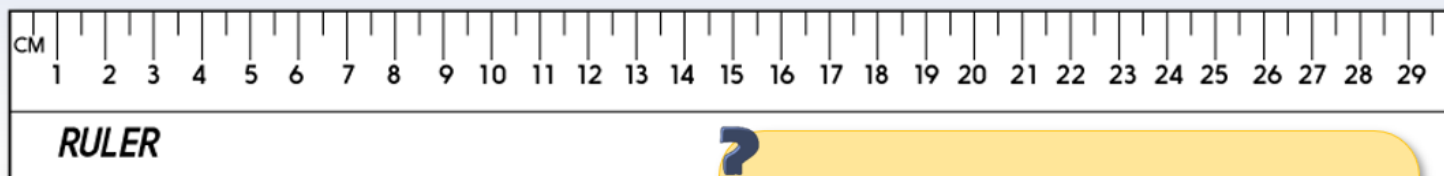
A new born baby might weigh 7 pounds. There are 16 ounces in a pound. So that's 112 ounces (16×7).
That's 112 bags of crisps!



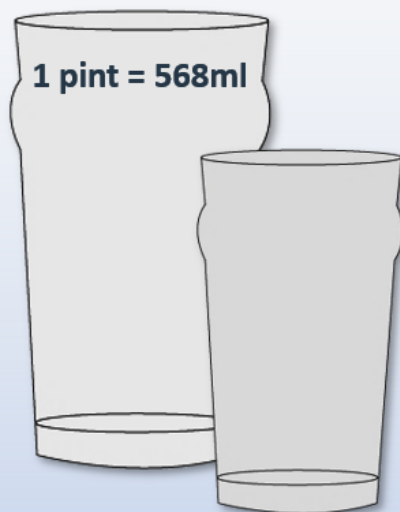
Many adults will know their weight in stones and pounds rather than kilograms.
There are 14 pounds in a stone.
10 kilograms is about the same as 1 stone 7 pounds.
If a child weighs 40 kilograms that's around 6 stone.

Learning Reminders

Know regularly used imperial units and approximate metric equivalents; covert between units.



**30cm is a funny number to choose for a ruler, but rulers used to be a foot long, 12 inches, about 30cm.
An inch is about an adult thumb width.**



Milk used to come in pint bottles and pubs still serve drinks in pint and half-pint glasses.

Learning Reminders

Know regularly used imperial units and approximate metric equivalents; covert between units.

Distances on signs in the UK are in miles.

But in France, for example, distances on signs are in kilometres.

A mile is longer than a kilometre, and a good approximate rule to convert from miles to kilometres or vice versa is to remember that 5 miles is approximately 8 km.

Miles	Kilometres
10	
15	
20	
50	

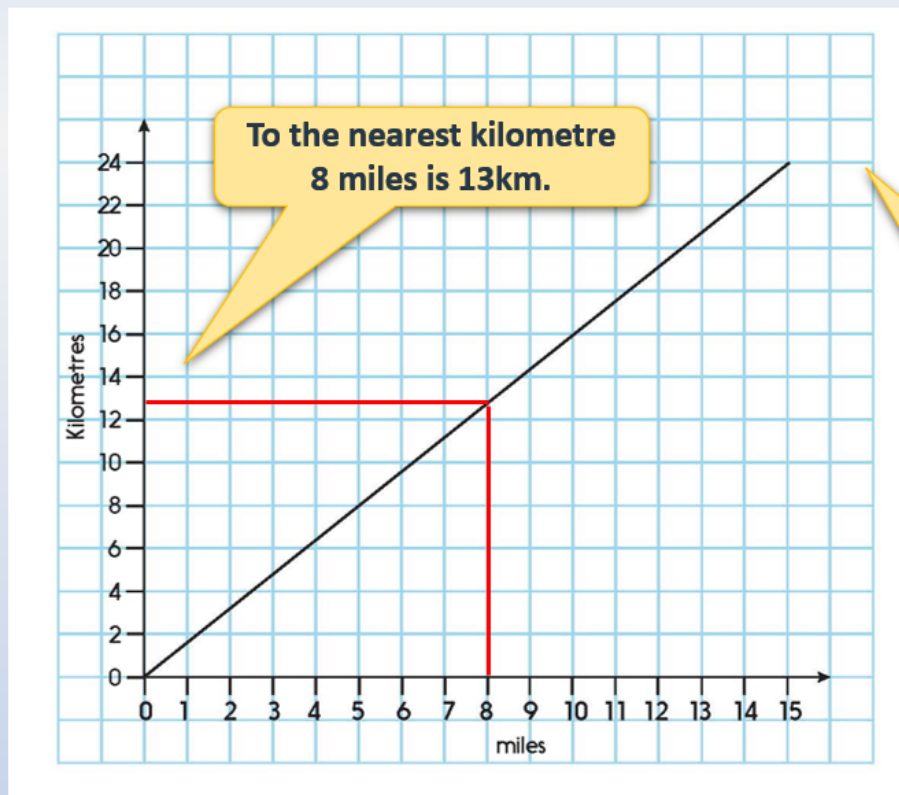
Complete this table showing the number of kilometres.

Answers

10miles = 16km
15miles = 24km
20miles = 32km
50miles = 80km

Learning Reminders

Know regularly used imperial units and approximate metric equivalents; covert between units.



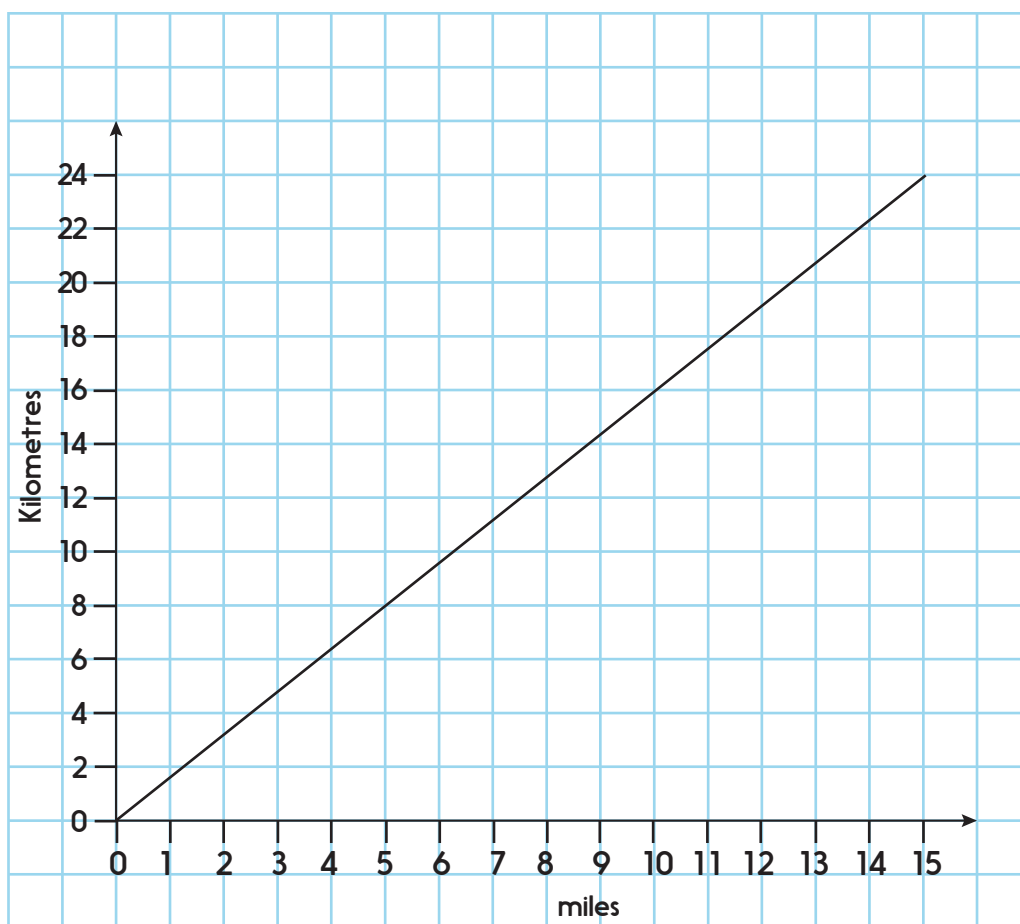
We can also use a graph to convert miles to kilometres.

For example to find 8 miles in kilometres draw a straight line up from 8 miles to where it meets the graph line, then trace across to read off the number of kilometres.

To convert kilometres to miles use the graph the other way around starting with kilometres.

Practice Sheet Mild

Converting between miles and kilometres



Use the graph to convert the following distances to the nearest kilometre.

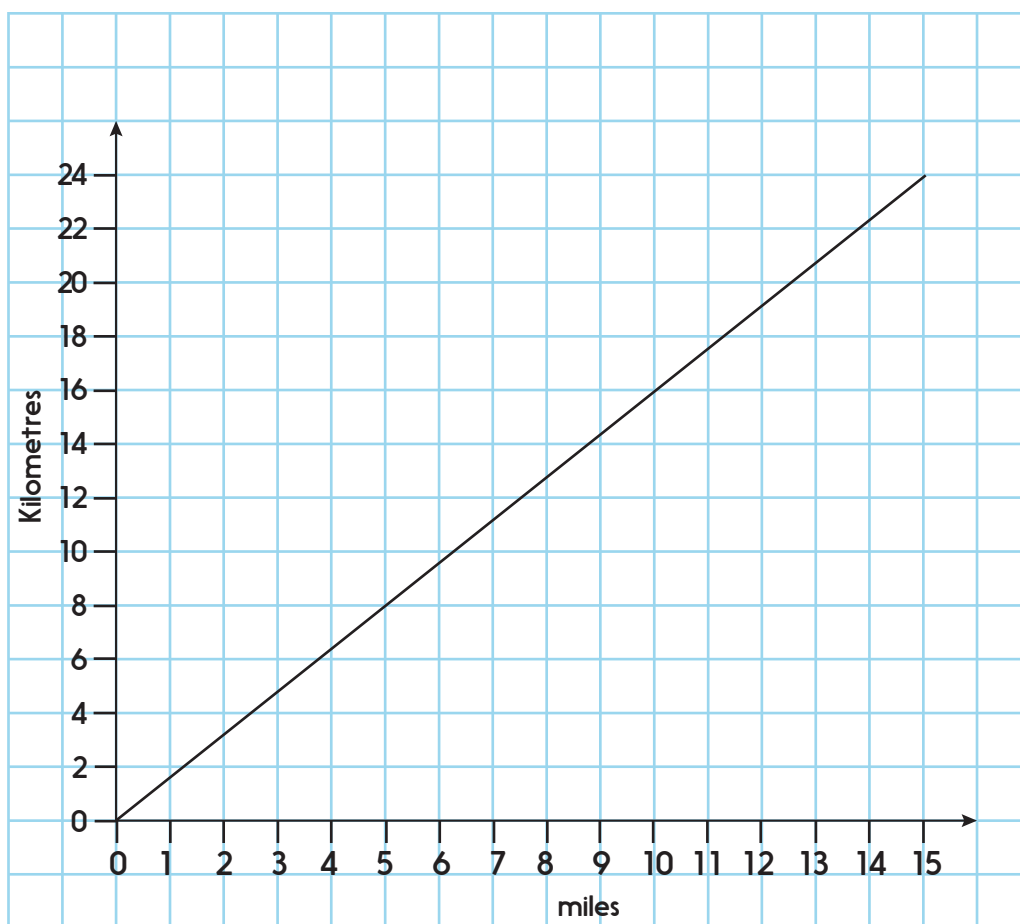
1. 5 miles
2. 10 miles
3. 2.5 miles
4. 12 miles

Use the graph to convert the following distances to the nearest mile.

5. 12 km
6. 24 km
7. 18 km
8. 7 km

Practice Sheet Hot

Converting between miles and kilometres



Use the graph to convert the following distances to the nearest kilometre.

1. 5 miles
2. 10 miles
3. 2.5 miles
4. 12 miles

Use the graph to convert the following distances to the nearest mile.

5. 12 km
6. 24 km
7. 18 km
8. 7 km

Challenge

Use your answers to estimate how many kilometres are equivalent to

1. 20 miles
2. 25 miles
3. 50 miles
4. 250 miles

Practice Sheet Hot

Converting between centimetres and inches

Use the information in the box below to complete this 'ready reckoner'. It helps people to approximately convert their heights from feet and inches to metres and centimetres, or vice versa.

30 cm is approximately 12 inches.
There are 12 inches in one foot.
1 inch is approximately $2\frac{1}{2}$ cm.

Ready Reckoner

Height in feet and inches	Height in metres and centimetres
5 feet	
	1m 35cm
5 feet 4 inches	
	1m 45cm
5 feet 8 inches	
5 feet 10 inches	
	1m 80cm
6 feet 2 inches	
6 feet 4 inches	

Challenge

Measure some distances around the classroom in metres and centimetres. For example, the length and width of the room, your desk, the whiteboard. Can you convert these to feet and inches?

Practice Sheet Answers

Practice Sheet (Mild)

1. 5 miles = 8 km
2. 10 miles = 16 km
3. 2.5 miles = 4 km
4. 12 miles = 19 km
5. 12 km = 7.5 miles
6. 24 km = 15 miles
7. 18 km = 11 miles
8. 7 km = 4 miles

Practice Sheet (Hot)

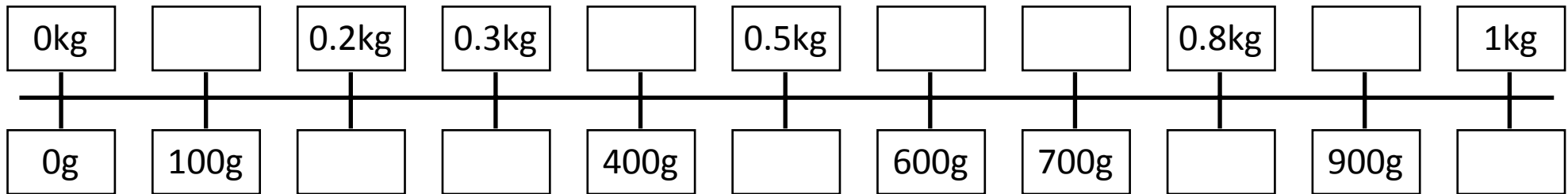
As above plus challenge

Challenge:

1. 20 miles = 32 km
2. 25 miles = 40 km
3. 50 miles = 80 km
4. 250 miles = 400 km

Height in feet and inches	Height in metres and centimetres
5 feet	1 m 50 cm
4 feet 6 inches	1 m 35cm
5 feet 4 inches	1 m 60 cm
4 feet 10 inches	1 m 45cm
5 feet 8 inches	1 m 70 cm
5 feet 10 inches	1 m 75 cm
6 feet	1m 80cm
6 feet 2 inches	1 m 85 cm
6 feet 4 inches	1 m 90 cm

A Bit Stuck? Equivalent measures



1. Complete the number line showing kg/g equivalents.
2. Use the line to help put the following groups of weights in order, lightest to heaviest:

a) 400g, 0.2kg, 900g, 0.5kg

b) 0.7kg, 100g, 0.4kg, 1000g

c) 450g, 0.3kg, 700g, 0.2kg

d) 0.3kg, 0.4kg, 250g, 350g

Check your understanding

True or false?

- 1050g = 1.5Kg
 - 1 pint is about 1.5 litres
 - 4 ounces is a bit more than 100g
 - 2.5 inches = 1 cm
 - 1 metre is a bit bigger than a yard
-

If we assume 3 miles = 5 kilometres, write the missing numbers:

km = 30 miles

35km = miles

miles = 2.5km

What imperial unit would be used to measure...

- (i) The length of a large dog, nose to tail?
- (ii) The weight of a child's lunch box?
- (iii) The capacity of a baby bath?

Answers on the next page

Problem solving and reasoning:

Answers

True or false

- $1050\text{g} = 1.5\text{Kg}$ False since it would be 1.05kg; 1.5kg would be 1500g.
 - 1 pint is about 1.5 litres False it is just over half a litre.
 - 4 ounces is a bit more than 100g True since 1 ounce is approximately 28g.
 - $2.5\text{ inches} = 1\text{ cm}$ False – the conversion is the other way around: 1 inch is approximately 2.5cm.
 - 1 metre is a bit bigger than a yard True.
-

If we assume 3 miles = 5 kilometres, write the missing numbers:

50 km = 30 miles

35km = 21 miles

1.5 miles = 2.5km

What imperial unit would be used to measure...

- (i) The length of a large dog, nose to tail? feet and inches.
- (ii) The weight of a child's lunch box? pounds / ounces.
- (iii) The capacity of a baby bath? pints / gallons.