Imperial units of mass

Discover

1 a) How many pounds of each type of fruit should Alex ask for?

b) What will the total of Alex's fruit weigh in kilograms?

Share

a) **Pounds** and **ounces** are imperial measures of mass. 1 pound (lb) equals 16 ounces (oz).

32 oz	
16 oz	16 oz
1 lb	1 lb

$32 \div 16 = 2$

32 oz = 2 lb

Alex should ask for 2 pounds of apples.

16 oz			
4 oz	4 oz	4 oz	4 oz

I am going to see how many lots of 4 oz are in 16 oz to help with the second amount.

$1 \div 4 =$

1 lb			
$\frac{1}{4}$ lb	$\frac{1}{4}$ lb	$\frac{1}{4}$ lb	$\frac{1}{4}$ lb

4 oz = $\frac{1}{4}$ lb

Alex should ask for $\frac{1}{4}$ of a pound of blueberries.

b) 32 + 4 = 36

Alex's fruit will weigh 36 oz altogether.

I know that 1 oz is about 28 g. First I am going to use long multiplication to convert into grams.

36 × 28

	20	8
30	600	240
6	120	48

600 + 240 + 120 + 48 = 1,008

	Th	H	T	O
		6	0	0
		2	4	0
		1	2	0
+			4	8
	1	0	0	8

36 × 28 = 1,008 1,008 ÷ 1,000 = 1·008

Alex's fruit will weigh about 1·008 kg.

Discuss with your carers then complete the activities in your maths book 5C p126

Think together

1 How many grams of raspberries are there in one container?

15 oz														
1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz
28 g	28 g	28 g												

$$\begin{array}{r} 28 \\ \times\ 15 \\ \hline 140 \\ 280 \\ \hline \end{array} \quad \begin{array}{l} 28 \times 5 \\ 28 \times 10 \\ 28 \times 15 \end{array}$$

$28 \times 15 =$ ☐

The raspberries weigh about ☐ g.

2 a) There are 16 ounces in 1 pound.

1 lb															
1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz	1 oz

Work out the number of ounces in these amounts.

4 lb = ☐ × ☐ = ☐ oz

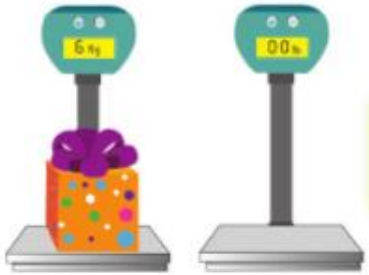
10 lb = ☐ × ☐ = ☐ oz

$\frac{1}{2}$ lb = ☐ ÷ ☐ = ☐ oz

b) Describe how you would find out what $\frac{3}{4}$ lb weighs in ounces.

3 a) Amelia is weighing a gift.

CHALLENGE



1 lb is approximately 450 g.

1 kg is approximately 2·2 lb.

What will the second set of scales show if Amelia weighs the gift using them?

I think I need to multiply 450 by 6 to find the answer.

I do not think that is right. I think you need to multiply 2·2 by 6 instead!

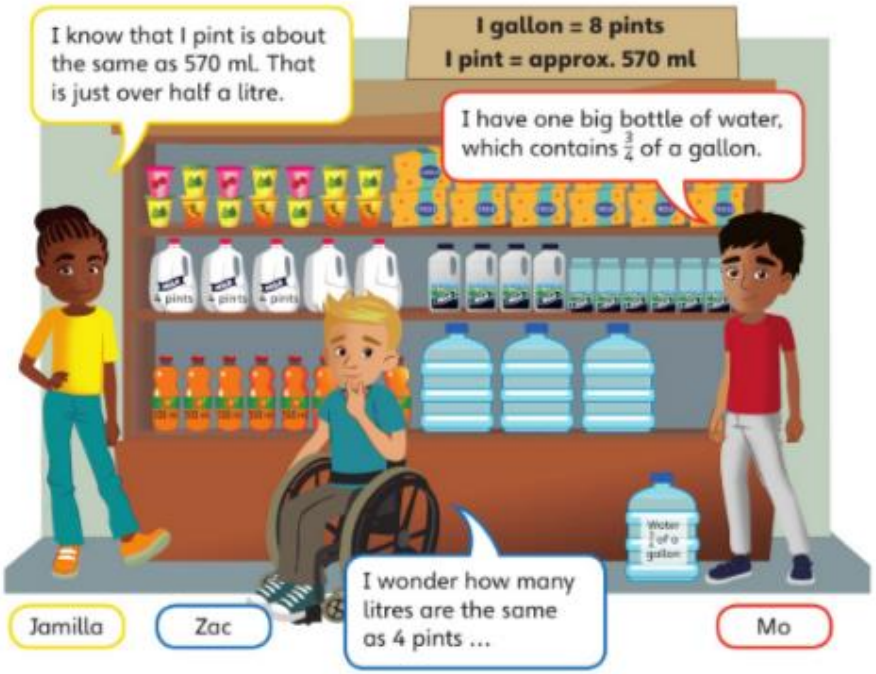
1 stone (st) = 14 lb

b) How many pounds does the dog weigh?

Estimate the number of kilograms that the dog weighs.

Imperial units of capacity

Discover



1 a) How many litres are approximately equal to 4 pints of milk?

b) How many litres of water does Mo have?

Share

a) Pints and gallons are imperial units of capacity.

4 pints

I pint	I pint	I pint	I pint
570 ml	570 ml	570 ml	570 ml

$$\begin{array}{r} 570 \\ \times \quad 4 \\ \hline 2280 \\ {\scriptstyle 2} \end{array}$$

I am going to use short multiplication to find the total in millilitres. Then I will need to convert into litres!

Th	H	T	O	•	Tth	Hth	
2	2	8	0	•			ml
			2	•	2	8	l

2,280 ÷ 1,000 = 2·28

2·28 litres are approximately equal to 4 pints of milk.

b) $\frac{3}{4}$ of a gallon = 6 pints

$$\begin{array}{r} 570 \\ \times \quad 6 \\ \hline 3420 \\ {\scriptstyle 4} \end{array}$$

1 gallon
8 pints

8 ÷ 4 = 2: 2 pints | 2 pints | 2 pints | 2 pints

$\frac{1}{4}$ of a gallon

2 × 3 = 6: 2 pints | 2 pints | 2 pints | 2 pints

$\frac{3}{4}$ of a gallon

Mo has 3,420 millilitres of water.

3,420 ÷ 1,000 = 3·42 Mo has 3·42 litres of water.

Discuss with your carers then complete the activities in your maths book 5C p129

Think together

1 a) This water container holds 5 pints of water.

Approximately how many litres is this the same as?

I pint	I pint	I pint	I pint	I pint
☐ ml	☐ ml	☐ ml	☐ ml	☐ ml

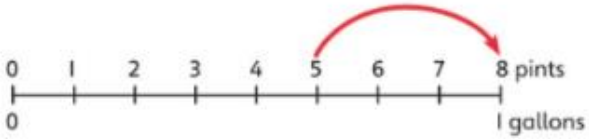
5 × ☐ = ☐

☐ ÷ 1,000 = ☐

5 pints are about the same as ☐ litres.

× 5

b) What is the difference between the capacity of the container and 1 gallon? Write your answer in litres.



5 7 0

×

☐ pints is the difference.

☐ millilitres is the difference.

☐ ÷ 1,000 = ☐

☐ litres is the difference.

2 Is half a pint of milk more or less than a 330 ml can of lemonade?

1 pint is approximately ☐ ml.

☐ ÷ 2 = ☐

Half a pint is approximately ☐ ml.

☐ ml is _____ than 330 ml.

So half a pint of milk is _____ than a 330 ml can of lemonade.

3 Can you fill up the bucket using the water in the container?

Will there be any left?

CHALLENGE

1 gallon = 8 pints

1 pint = approximately 570 ml

1 gallon is 570 ml, so there is not enough water in the container to fill the bucket.

That is not right! You need to use the number of pints in a gallon to help.

Converting units of time

Discover

1 a) How many weeks has Toshi had his phone for?

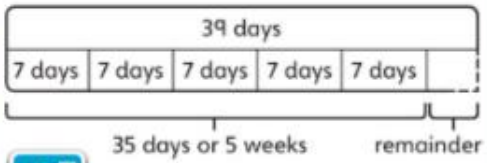
b) How many bars of Amal's battery should be charged fully?

How long until the next bar is charged?

Share

a)

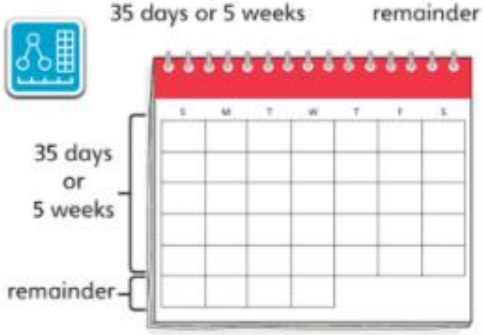
There are 7 days in 1 week. 39 is not a multiple of 7, so I predict that there will be a remainder.



$39 \div 7 = 5$ remainder 4

So 39 days = 5 weeks and 4 days

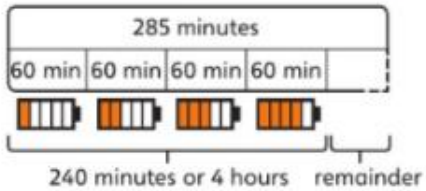
Toshi has had his phone for 5 weeks and 4 days.



b) 60 minutes = 1 hour

285 minutes is between 240 and 300 minutes.

285 minutes = 4 hours and a remainder of minutes



Amal's phone should have 4 bars fully charged.

285 – 240 = 45

Amal's phone has been charging for 4 hours and 45 minutes.

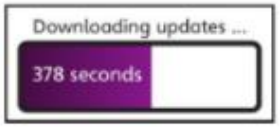
60 – 45 = 15

There are 15 minutes left until the next bar is charged.

Discuss with your carers then complete the activities in your maths book 5C p132

Think together

1 Amal's phone is downloading updates. How many minutes has his phone been downloading updates for?



0 1 2 3 4 5 6 7 minutes

0 60 120 ☐ ☐ ☐ ☐ ☐ seconds

Count in 60s.

378 is between ☐ and ☐.

So there are ☐ minutes and there will be a remainder of seconds.

378 – ☐ = ☐

Amal's phone has been downloading for ☐ minutes and ☐ seconds.

2 How long until the sale ends?

5 weeks

1 week				
7 days				

☐ days

5 weeks = 5 × 7 = ☐ days

☐ – 22 = ☐

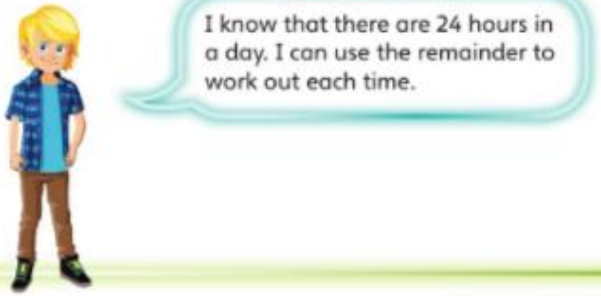
There are ☐ days left until the sale ends.

3 Jen's watch shows this time:

CHALLENGE

a) What will Jen's watch look like at each of these times?

b) How many hours it is from the time on the watch until Jen returns on the ferry?



Timetables

Discover

Stop	Bus A	Bus B	Bus C
Nicolson Street	07:15	07:30	07:45
Clemence Way	07:35	07:50	08:05
Hart Lane Shops	07:42	07:57	08:12
Mason Avenue	07:46	08:01	08:16
Marigold Crescent	07:56	08:11	08:26
Anderton Primary School	08:05	08:20	

1 a) What time does Emma arrive at school?

b) All the buses take the same time to get to school. What time does Bus C arrive?

Share

a) Each column of the timetable shows a different bus. Each row shows a different place.

Stop	Bus A
Nicolson Street	07:15
Clemence Way	07:35
Hart Lane Shops	07:42
Mason Avenue	07:46
Marigold Crescent	07:56
Anderton Primary School	08:05

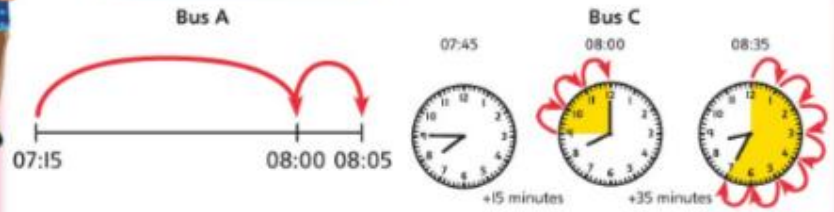
→ Twenty-five minutes to 8
= 7:35 am
= 07:35

Timetables are usually written in 24-hour digital time, so you will have to convert first.

Emma catches Bus A. Emma arrives at school at 08:05 (five minutes past 8).

b) I am going to use the information from the other buses to work out the hidden time.

Stop	Bus A	Bus B
Nicolson Street	07:15	07:30
Anderton Primary School	08:05	08:20



Each bus takes 50 minutes to get from Nicholson Street to school.

Bus C arrives at school at 08:35.

Discuss with your carers then complete the activities in your maths book 5C p135

Think together

1 Look at this train timetable.

Littleborough	14:13	14:43	15:13	15:43
Birchfield	14:37	15:07	–	16:07
Ashtown Parkway	15:09	15:39	–	16:39
Ashtown Central	15:20	15:50	16:00	16:50

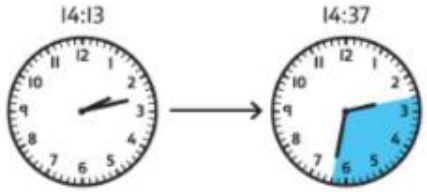
a) Lexi gets on the 15:07 train at Birchfield.

What time does she arrive in Ashtown Central?

Lexi arrives in Ashtown Central at ☐ : ☐.

Littleborough	14:43
Birchfield	15:07
Ashtown Parkway	15:39
Ashtown Central	15:50

b) Andy gets on the 14:13 train at Littleborough.



Littleborough	14:13
Birchfield	14:37
Ashtown Parkway	15:09
Ashtown Central	15:20

How long does it take to get to Birchfield?

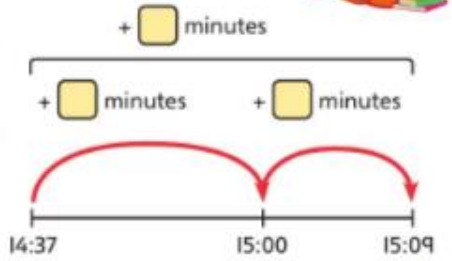
It takes ☐ minutes to get to Birchfield.

2 How long does it take to get from Birchfield to Ashtown Parkway?

Littleborough	14:13
Birchfield	14:37
Ashtown Parkway	15:09
Ashtown Central	15:20

It takes ☐ minutes to get from Birchfield to Ashtown Parkway.

The journey crosses the o'clock boundary, so I am going to count in two jumps.



3 The 15:13 train from Littleborough to Ashtown Central is an express train. It does not stop anywhere else.

CHALLENGE

Littleborough	15:13
Birchfield	–
Ashtown Parkway	–
Ashtown Central	16:00

I want to get from Littleborough to Ashtown Central as quickly as possible!

Aki

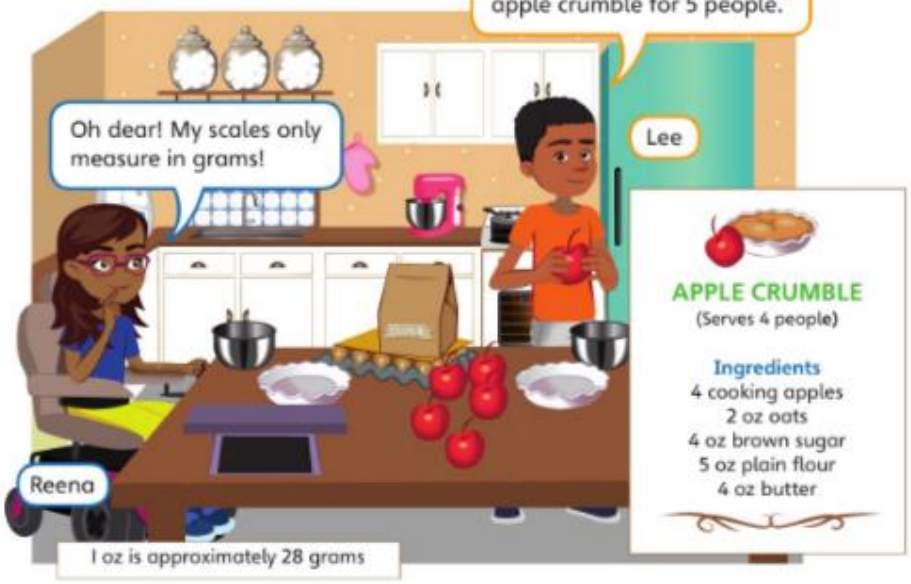
How much quicker is it for Aki to catch the express train than one of the other trains?

I am going to work out how long each journey is before finding the difference.

I think there is a quicker way. I can compare the departure and arrival times of the two journeys.

Problem solving – measure

Discover



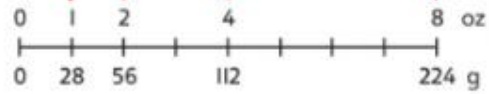
1 a) How can Reena measure the ingredients using her scales?

b) What quantities should Lee use to make enough apple crumble for 5 people?

Share

a) Reena needs to convert from ounces (oz) to grams (g).

5 oz = 4 oz + 1 oz = 112 g + 28 g = 140 g

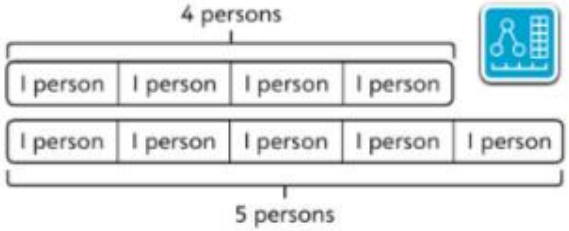


I could multiply each number by 28, but I can see a way to use doubling facts to help me multiply more quickly!

Reena can use the scales to measure these amounts:

2 oz = 56 g oats
4 oz = 112 g brown sugar
4 oz = 112 g butter
5 oz = 140 g plain flour

b) The recipe is for 4 people. Lee can divide each ingredient by 4 and multiply by 5.



I can divide by 4 to find the quantities for one person. I will use this to alter the recipe for 5 people!

Ingredient	÷ 4 (one person)	× 5 (five people)
4 cooking apples	4 ÷ 4 = 1	1 × 5 = 5 cooking apples
56 g oats	56 ÷ 4 = 14 g	14 × 5 = 70 g oats
112 g brown sugar	112 ÷ 4 = 28 g	28 × 5 = 140 g brown sugar
112 g butter	112 ÷ 4 = 28 g	28 × 5 = 140 g butter
140 g plain flour	140 ÷ 4 = 35 g	35 × 5 = 175 g plain flour

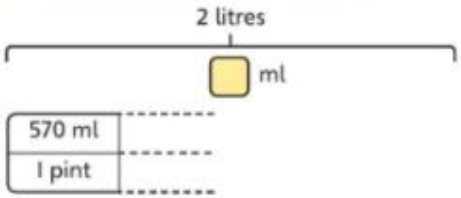
Discuss with your carers then complete the activities in your maths book 5C p138

Think together

1 Jamie wants to fill a 2 litre jug with milk.

a) How many cartons of milk does she need to open to pour into the jug?

1 pint is approximately 570 ml.



Jamie will need to open ☐ cartons of milk.

b) How much milk will Jamie have left over?

Jamie will have ☐ ml left over.

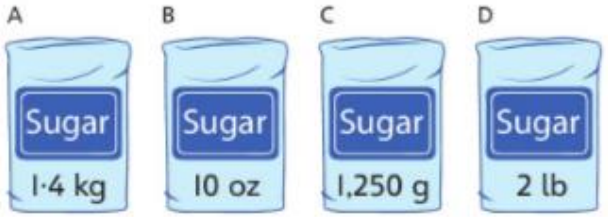
2 Danny is making a fruit pie.

He wants to serve it at 17:10.

Read the instructions. What is the latest time he should start preparing it?

3 These bags of sugar are all the same price.

CHALLENGE



1 ounce (oz) is approximately 28 g.

1 pound (lb) is approximately 0·45 kg.

Which one is the best value?

Explain how to find the answer.