Year 2 Green Knowledge Organiser: Numbers to 100

1 ten

Count in tens.
10 ones = 1 ten

10 colours

10

2 tens

10 colours 10 colours

20

3 tens

10 colours 10 colours 10 colours

30

4 tens

10 colours 10 colours 10 colours 10 colours

40

5 tens

10 colours 10 colours 10 colours 10 colours 10 colours

50
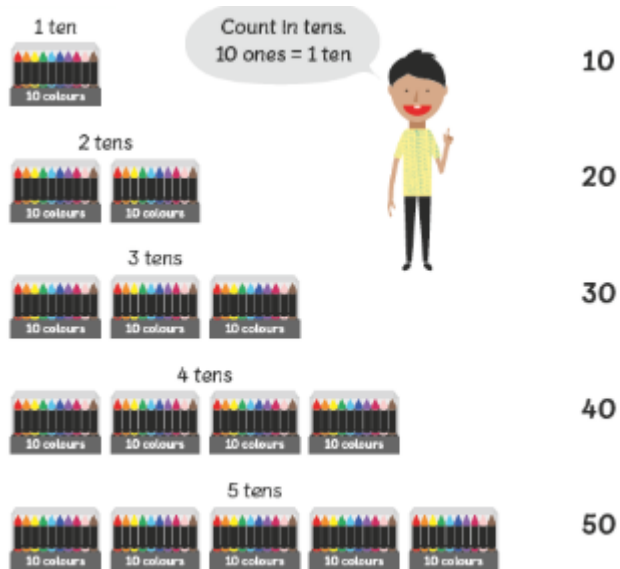
Can you count in 10s up to 100?

Can you count in 10s and follow by counting in ones?

We can arrange the numbers in order:

75,   69,   63

greatest ──────────────→ smallest

Can you place numbers in order from smallest to greatest and vice versa?

tens	ones
5	6

56

50   6

5 6
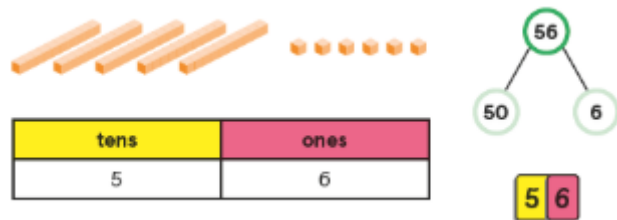
Can you represent a number using multiple methods?

2 more	2 more	2 more	2 more

42	44	46	48	50

41   42   43   44   45   46   47   48   49   50   51
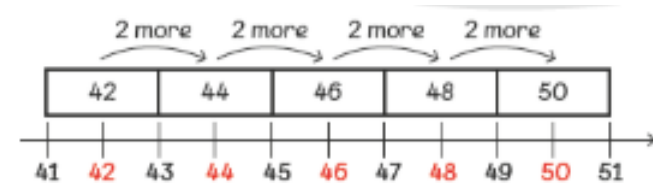
Can you see patterns when increasing or decreasing by 1, 2 or 5?

What is 5 less than 45? What is 5 less than 40?

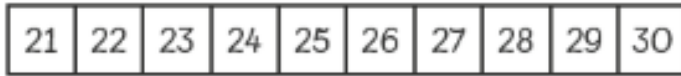| 4	5		4	0		3	5
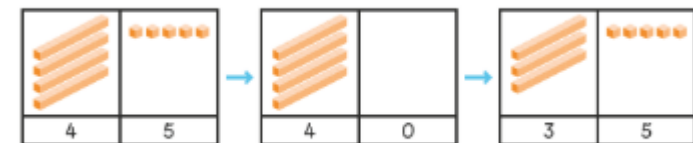
5 less than 45 is 40. 5 less than 40 is 35.

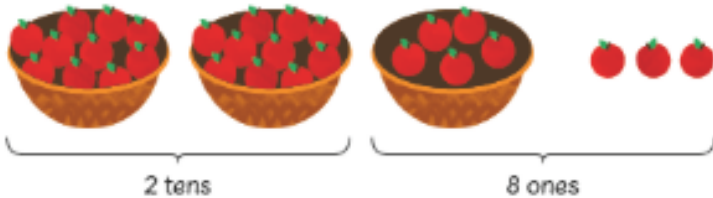# Year 2 Green Knowledge Organiser: Addition & Subtraction

Add 25 and 3.

Method 1   Count on from 25.

21	22	23	24	25	26	27	28	29	30

$25 + 3 = 28$

Method 2   Add ones.

2 tens   8 ones

$25 + 3 = 28$
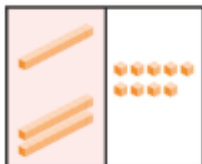
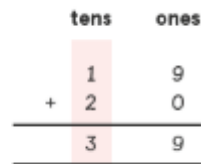Can you add ones to a 2 digit number without renaming?

$2 + 4 = 6$

$20 + 40 = 60$

Can you add tens by recognising its relationship to adding ones?

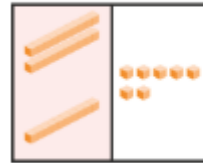Can you add a 2 digit number and tens without regrouping?

1 ten + 2 tens = 3 tens

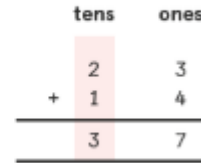|	tens	ones
	1	9
+	2	0
	3	9

$19 + 20 = 39$

Add the tens.
2 tens + 1 ten = 3 tens

	tens	ones
	2	3
+	1	4
	3	7

$23 + 14 = 37$

Can you add 2 digit numbers without renaming?

Add 24 and 7.

Step 1   Add the ones.
4 ones + 7 ones = 11 ones
Regroup the ones.
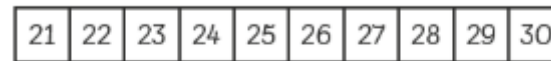11 ones = 1 ten and 1 one

Use [grid] to help you add.

	tens	ones
	2	4
+		7
	1	1
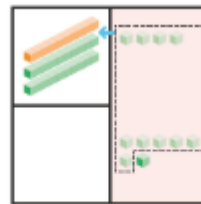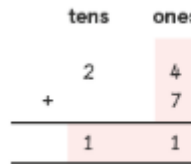
Can you add 1 and 2 digit numbers to 2 digit numbers with renaming of ones?

Subtract 3 from 28.

Method 1   Count back from 28.

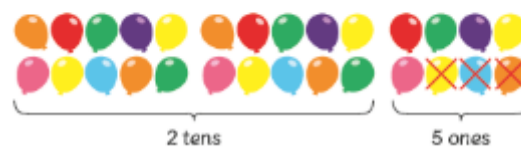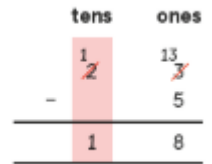| 21	22	23	24	25	26	27	28	29	30

$28 - 3 = 25$
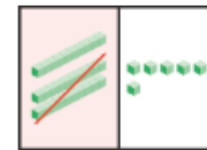
Method 2   Subtract ones.

2 tens   5 ones

$5 - 2 = 3$

$50 - 20 = 30$

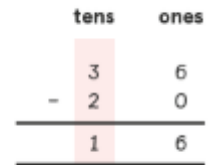Can I subtract tens by recognising its relationship to subtracting ones?

Subtract the tens.
3 tens − 2 tens = 1 ten

	tens	ones
	3	6
−	2	0
	1	6

$36 - 20 = 16$

Can you subtract 2 digit numbers without renaming?

Can you add three single digit numbers?

---

	tens	ones
	1 2	13 3
−		5
	1	8

Can you subtract using renaming?

Can you subtract ones from a 2 digit number using counting back or crossing out?

Make 10.   7 and 3 make 10.

$7 + 3 + 2 = 10 + 2$
$= 12$

Add by counting on.

7	8	9	10	11	12

7	8	9	10	11	12
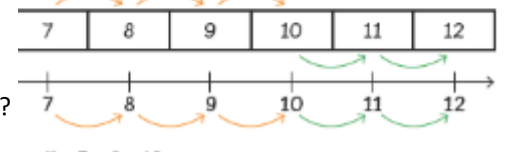
Year 2 Green Knowledge Organiser: Multiplication and Division of 2, 5 and 10

$5 + 5 + 5 = 15$

3 groups of $5 = 15$

$3 \times 5 = 15$

Do you understand multiplication is the same as repeated addition of equal groups?

Each bag holds 5 apples.
How many apples are there in 3 bags?

Can you solve word problems using multiplication facts?

How many groups are there?

$8 \div 2 = 4$

There are 4 groups.

Do you understand grouping is a way of dividing?

1 stick has 2 sausages.

1 stick has 5 marshmallows.

1 group of 2
$1 \times 2 = 2$

1 group of 5
$1 \times 5 = 5$

2 groups of 2
$2 \times 2 = 4$

2 groups of 5
$2 \times 5 = 10$

3 groups of 2
$3 \times 2 = 6$

3 groups of 5
$3 \times 5 = 15$

There are 18 sausages.

Put 18 sausages equally on 2 plates.

There are 9 sausages on each plate.

$18 \div 2 = 9$

Do you understand sharing is a way of dividing?

Do you understand and know the 2, 5 and 10 times table?

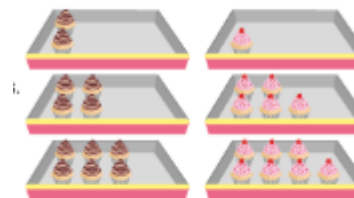Do you understand the commutative law—multiplication can be done in any order?

Do you understand the division facts for the 2, 5 and 10 times table?
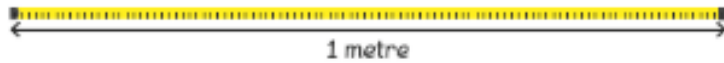
$10 \times 2 = 20$ $2 \times 10 = 20$

Can you recognise odd and even numbers?

$5 \times 2 = 10$ ———— $10 \div 2 = 5$
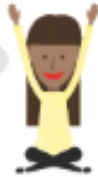$2 \times 5 = 10$ ———— $10 \div 5 = 2$

Can you identify multiplication and division fact families?

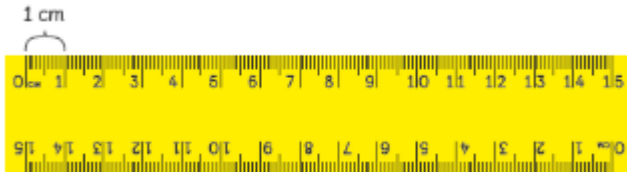# Year 2 Green Knowledge Organiser: Length, Mass & Temperature

1 metre

This is a tape measure.
It is one metre long.
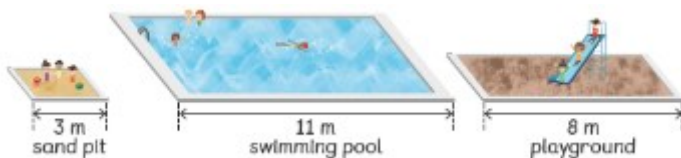A metre is a unit of length.
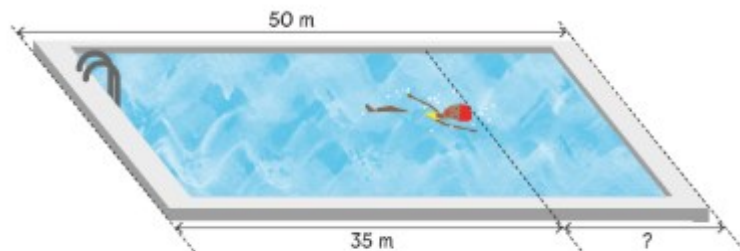We write m for metre.

We read 1 m as one metre.

Can you measure length in metres?

1 cm

Can you measure length in centimetres?

Can you measure mass in kilograms and grams?

380 g   ? g

The total mass of the bowl and the grapes is 640 g.
How do we find the mass of the grapes?

Can you solve word problems involving
the addition and subtraction of mass?

Ravi   Ruby   Emma

30 kg   22 kg   25 kg

Who is heavier, Ravi or Ruby?   Ravi

Who is lighter, Emma or Ruby?   Ruby

Can you estimate the temperature?

What is the temperature today?
Is it a warm day?

3 m   11 m   8 m
sand pit   swimming pool   playground

Can you compare and order lengths using <, >, and =?

Can you compare the mass of two or three different
objects accurately?

50 m

35 m   ?
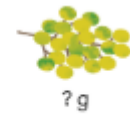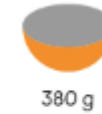
Lulu wants to swim 50 metres.
How far is she from the finishing line?

Can you solve length word
problems?

Can you read temperature
accurately in Celsius?

It reads about 20 degrees Celsius.

Year 2 Green Knowledge Organiser: Picture Graphs

Fruits in the Basket

strawberry	⧾⧾⧾ /
orange	//
pear	////
apple	⧾⧾⧾ //

Fruits in the Basket

strawberry	orange	pear	apple
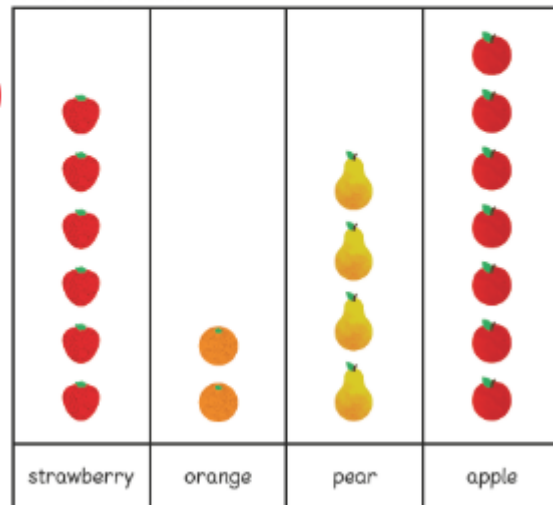
Each picture stands for one piece of fruit.

We can also use one ● to stand for 2 animals.

tiger	giraffe	elephant	monkey

Each ● stands for 2 animals.
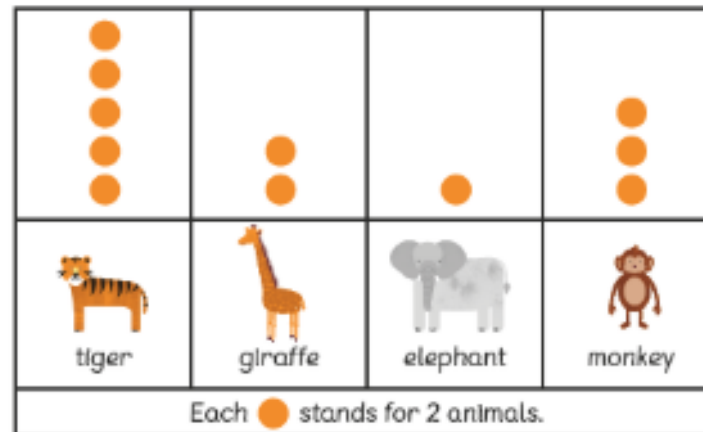
Can you read and interpret a picture graph with a scale of 1:2?

Can you read and interpret a picture graph and tally chart with a scale of 1:1?

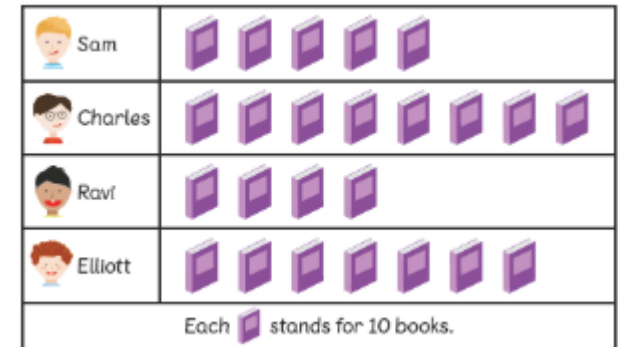| Group	Stars	Number of stars
A	★★★★★★★★	8
B	★★★	3
C	★★★★★★★★	8
D	★★★★★★★★★	9

Group D has the most number of stars.
Group B has the least number of stars.
Group A has as many stars as Group C.

	Sam	
	Charles	
	Ravi	
	Elliott	

Each ▦ stands for 10 books.

Can you read and interpret a picture graph with a scale of 1:10?

yellow beads	⧾⧾
green beads	⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾
blue beads	⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾
red beads	⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾⧾

From the tally chart, Sam made this pictogram.

yellow beads	
green beads	
blue beads	
red beads	
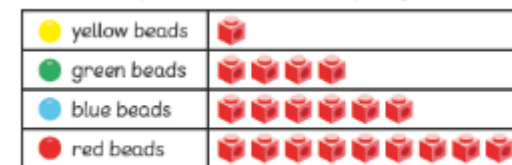
Each ▪ stands for 5 beads.

Can you read and interpret a picture graph with a scale of 1:5?

Year 2 Green Knowledge Organiser: Word Problems

How do we find the number of marbles Amira has left? Should we add or subtract?

I had 89 marbles. I gave 16 marbles to Sam and 9 marbles to Emma.

Can you solve word problems involving addition and subtraction of whole numbers within 100?

There were 46 male adults and 49 female adults in a hall. There were 29 fewer children than adults. How many children were there in the hall?

Can you solve two-step word problems involving addition and subtraction of whole numbers within 100?

The blue ribbon is 31 cm long. The blue ribbon is 12 cm longer than the red ribbon. Can we draw models to find out how long the red ribbon is?

Can you solve world problems involving addition and subtraction of measurements?

Is 8 kg heavier than .

Is it possible to find out how heavy each child is?

Can you solve multi-step word problems with increasing complexity?

Year 2 Green Knowledge Organiser: Money

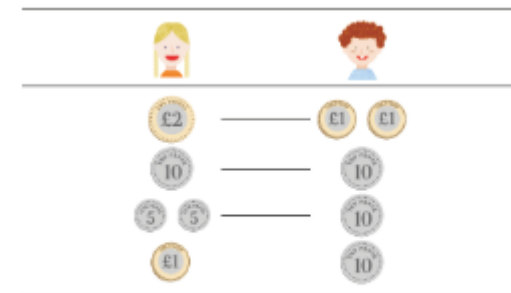Can you identify pounds (£) and pence (p) and their respective symbols?

£2

50   20   2   2   1

Sam has £2 and 75p.

£1   £1

20   20   20   10   5

Ruby also has £2 and 75p.

Can you find different combinations of coins that equal the same amount of money?

£2 ——— £1 £1
10 ——— 10
5 5 ———
£1 ——— 10
        10

has more money.

Can you compare different amounts of money?

Count on to find the amount.

Charles saves £25.

Lulu saves £20.

Can you count money in notes and coins and use the symbol for pounds (£) and pence (p)?

£100
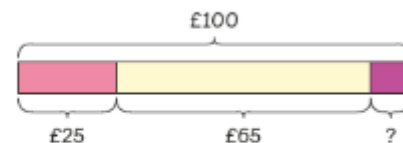
£25   £65   ?

£25 + £65 = £90

Charles spent [ ] altogether.

Can you solve word problems involving finding a total and calculating change?

Year 2 Green Knowledge Organiser: Two-Dimensional Shapes

This is a square.

has 4 sides.

This is a rectangle.

has **4** sides.

Can you identify the number of sides on basic 2-D shapes?

Can you identify lines of symmetry in 2-D shapes and figures

Amira sorted the shapes by the number of sides.

3 sides	4 sides	6 sides

Can you
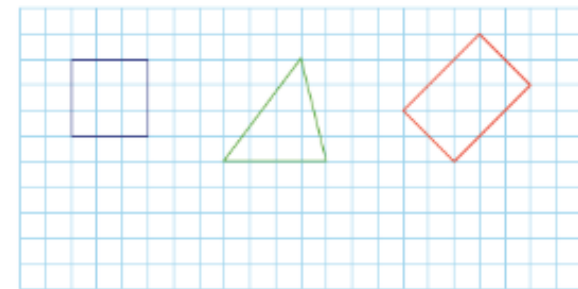
Can you draw basic shapes on a grid?

This is a **vertex** of a square.

The plural for vertex is **vertices**.

A square has 4 vertices.

Can you identify and count the vertices in regular polygons?
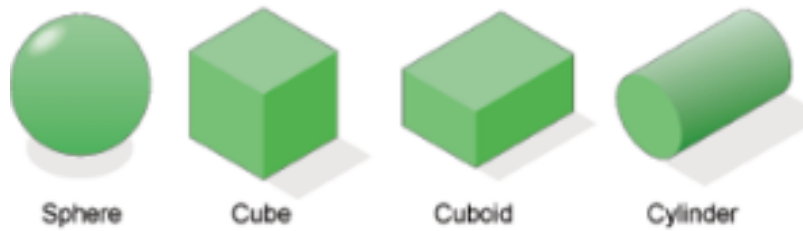
1 step

1 step

Can you recognise repeated patterns by size, shape or colour and describe terms in a pattern?
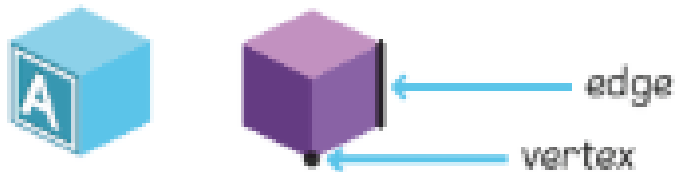
Can you describe direction and movement using vocabulary such as: left, right, up and down?

Can you describe rotation using vocabulary, such as 'quarter turn', 'half turn' and 'three-quarter turn'; to be able to describe direction using vocabulary, such as 'clockwise' and 'anti-clockwise'?

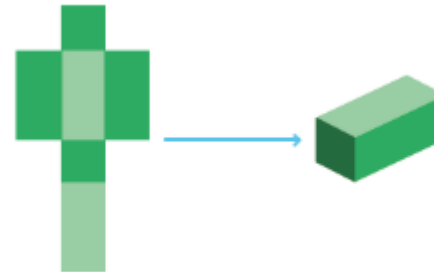# Year 2 Green Knowledge Organiser: Three-Dimensional Shapes

Sphere Cube Cuboid Cylinder

Cone Square-based pyramid Triangular-based pyramid Triangular prism
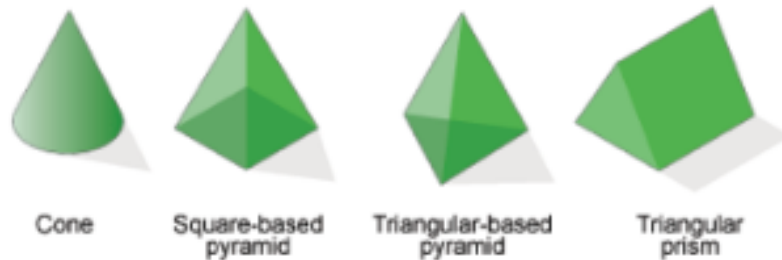
Can you recognise 3-D shapes by identifying their properties?

cube

✓ cylinder

✓ cone

✓ cuboid

Can I form 3-D structures using multiple 3-D shapes?

Can you describe the 2-D shapes that form a 3-D shape?

edge

vertex

Can you describe 3-D shapes based on their properties, including vertices and edges?

?

Can you make patterns using 3-D shapes?

cubes cylinders cones

spheres cuboids

Can you group 3-D shapes by similar properties?
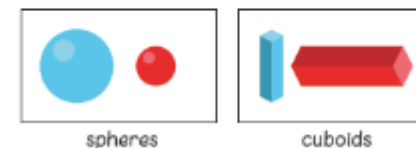
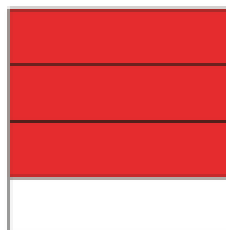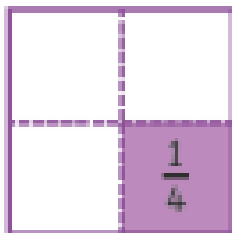# Year 2 Green Knowledge Organiser: Fractions

The pieces are equal parts

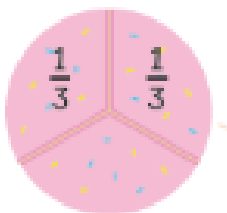Another way is ───── but this is the same way as before.

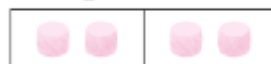Can you recognise that fractions are made up of equal parts of a whole?

3 ← Numerator

4 ← Denominator

Can you use the phrases 'numerator' and 'denominator' when talking about fractions?

This is 1.

This is $\frac{1}{2}$.

gets $1\frac{1}{2}$ pieces.

Can you recognise and write mixed numbers?

$\frac{1}{4}$

Can you recognise, find, name and write 1/2, 1/4 and 3/4?
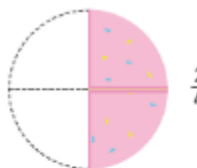
What is $\frac{1}{2}$ of 4?

$\frac{1}{2}$ of 4 = 2

Can you find fractions of a set or quantity?
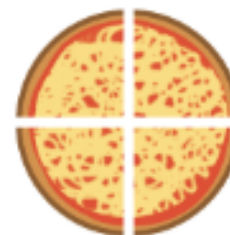
The pizza is divided into 4 equal parts.

4 quarters or 4 fourths make 1 whole.

Can you add fractions with the same denominator to make a whole?

$\frac{1}{3}$ $\frac{1}{3}$

Can you recognise, find, name and write thirds?
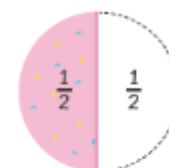
$\frac{2}{4}$ Lulu
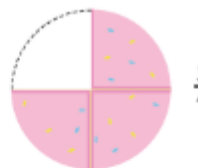
$\frac{3}{4}$ Elliott

$\frac{3}{4}$ is more than $\frac{2}{4}$.

Elliott eats more cake than Lulu.

Can you compare and order fractions with the same denominator?

$\frac{1}{2}$ $\frac{1}{2}$ Charles
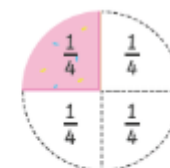
$\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ Holly

$\frac{1}{2}$ is more than $\frac{1}{4}$.

Can you compare and order unit fractions?

Year 2 Green Knowledge Organiser: Time

5 minutes

5 minutes after 3 o'clock is 3:05.

3 o'clock
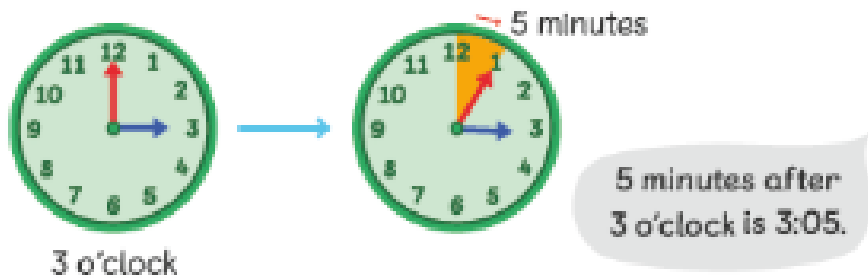
After 5 minutes, the minute hand moves from 12 to 1.
We write the time as 3:05.

Can you tell the time to five minutes?

in the morning

The time is 8:15.

in the evening

The time is half past five.
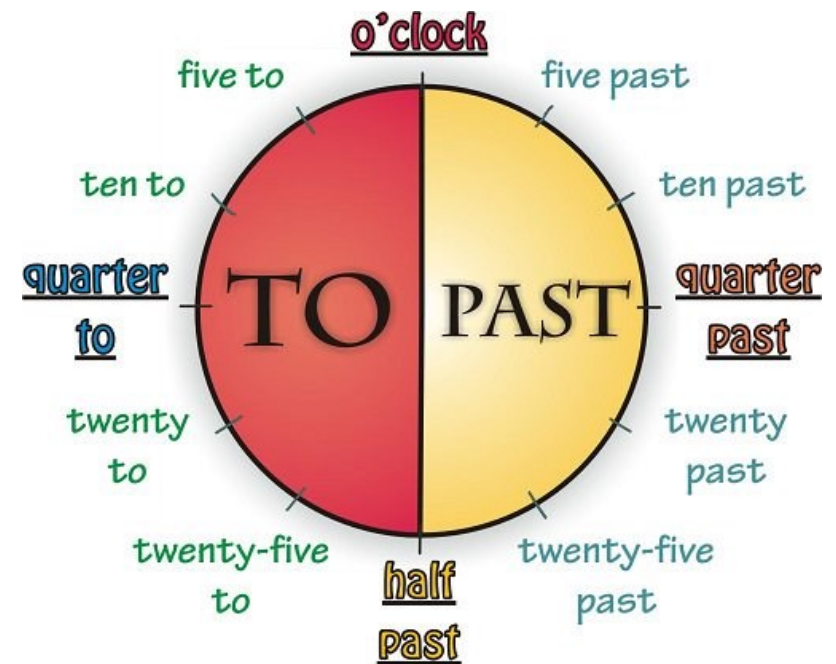
in the evening

The time is quarter to eight.
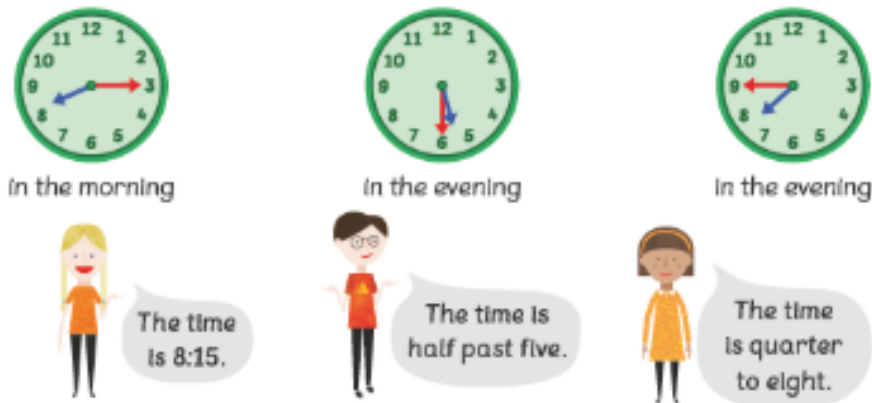
Can you use 'quarter past', 'half past' and 'quarter to' the hour?

Can you sequence daily events by time?

Can you find time durations to 5 minute intervals?

Can you compare time in hours and minutes?

o'clock

five to   five past

ten to   ten past

quarter
to   TO PAST   quarter
past

twenty
to   twenty
past

twenty-five
to   half
past   twenty-five
past

20 minutes

later

5:20 is 20 minutes after 5 o'clock.

Can you find the end time if you are given the start time?

Can you find the start time if you are given the end time?

Year 2 Green Knowledge Organiser: Volume
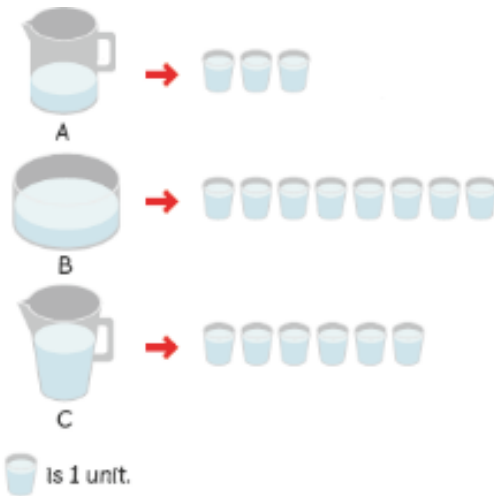
Container A has the least amount of water:

We write [ ] < [ ] .

A   B

Can you compare and order volume using >, < and =?

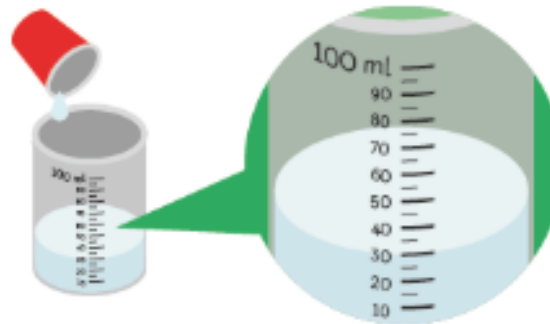The volume of cooking oil is more than 1 l.
The volume of cooking oil is about 2 l.

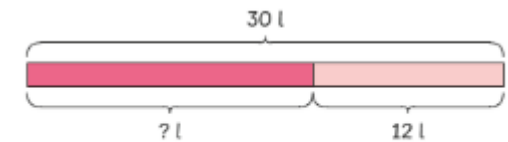Can you measure volume in litres?

A

B

C

Is 1 unit.

Can you compare the volume of water using
non-standard units of measurement?

100 ml
90
80
70
60
50
40
30
20
10

Can you measure and compare volume in millilitres?

30 l

? l   12 l

30 – 12 = 18
The car used 18 l of petrol.

Can you solve word problems on volume of water in litres and millilitres?