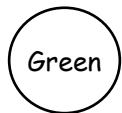


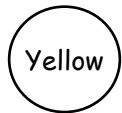
Year 1 Topics for NC Mathematics

How to use this booklet

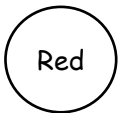
Work through the booklet and colour in the circle after each topic with traffic light colours like this:



I really understand this



I need to practise more to get the idea



I don't really understand and need help

Doing this will help you to get a better idea of the things that you need to learn.

There is a lot of challenging material in the Year 1 Programme and parents and/or teachers will need to read and talk their children through this booklet.

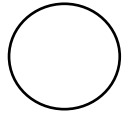
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The booklet is intended as a support material for the Key Stage 1 maths and is not a comprehensive pedagogy of all the maths topics that may be set on the Key Stage 1 maths test.

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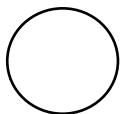
Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number



Read out the numbers that are shaded in grey to your teacher, parent or some other adult.

0	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31	32	33	34	35	36	37	38	39	40
	41	42	43	44	45	46	47	48	49	50
	51	52	53	54	55	56	57	58	59	60
	61	62	63	64	65	66	67	68	69	70
	71	72	73	74	75	76	77	78	79	80
	81	82	83	84	85	86	87	88	89	90
	91	92	93	94	95	96	97	98	99	100

Count, read and write numbers to 100 in numerals



1. When the number in the speech bubble is read out, write this number into the box.

Seven

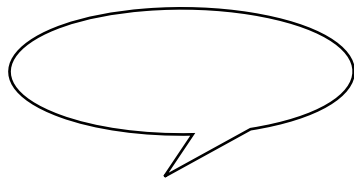
Twelve

Thirty-two

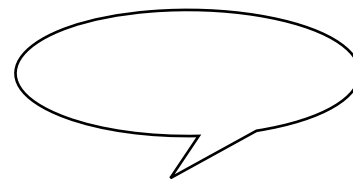
Fifty-nine

2. Say the number needed for the speech bubble to describe the number in the box.

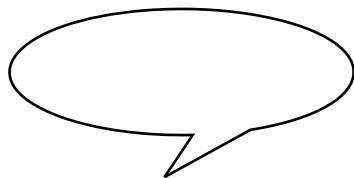
8



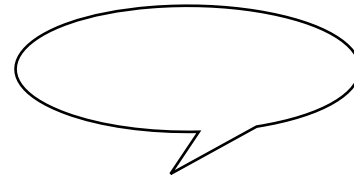
17



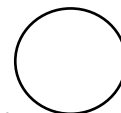
65



84



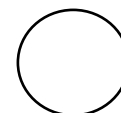
Count in multiples of twos, fives and tens



Write down the next three numbers in each of these lists of numbers so as to keep the pattern the same

6	8	10	12			
22	24	26	28			
5	10	15	20			
60	65	70	75			
10	20	30	40			
33	43	53	63			

Given a number, identify one more and one less



Write one more and one less for each of the numbers in the middle of the three boxes. The first one has been done for you.

16	17	18		6	
	14			22	

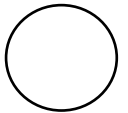
	44	
--	----	--

	67	
--	----	--

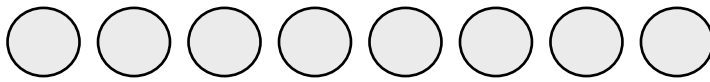
	70	
--	----	--

	89	
--	----	--

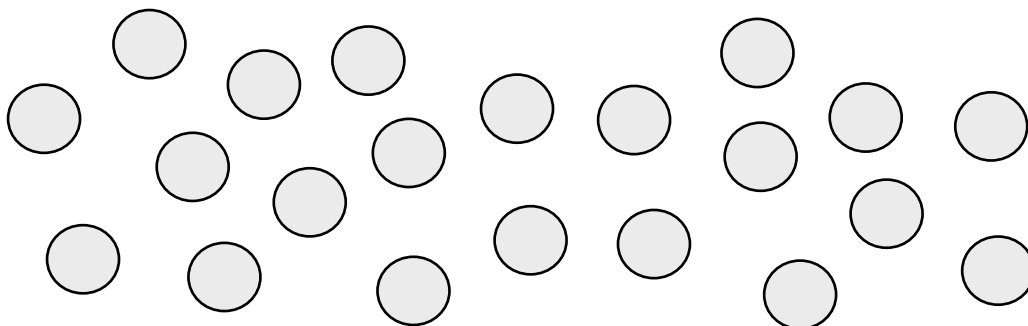
Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least



1. Write in each box the number of counters in the group next to the box

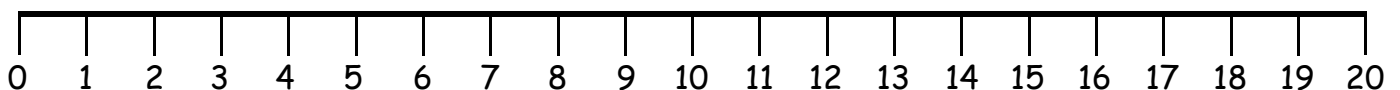


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2. Here are the numbers from 0 to 20 on a number line



Write in the boxes below all the whole numbers on this line that are more than 15

--	--	--	--	--

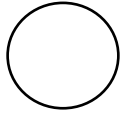
Write in the boxes below all the whole numbers on this line that are less than 7 on this line

--	--	--	--	--	--	--

Write in the boxes below all the whole numbers on this line that are more than 9 but less than 15 on this line

--	--	--	--	--

Read and write numbers from 1 to 20 in numerals and words



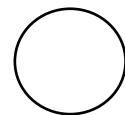
Using the numbers and words below, complete the two tables

1	2	3	Four	Five	Six	7	Eight
Nine	10	11	Twelve	13	Fourteen		
15	Sixteen		17	18	19		20

Number	Name
	One
	Three
	Seven
12	
8	
9	
4	
	Eleven
	Thirteen
	Twenty

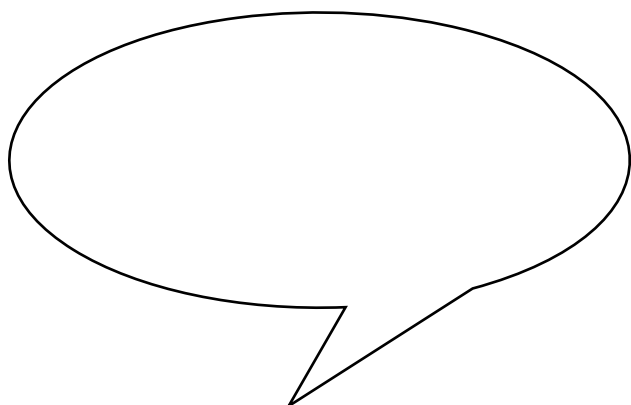
Number	Name
5	
6	
16	
	Eighteen
	Fifteen
	Seventeen
	Nineteen
14	
	Ten
	Two

Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs

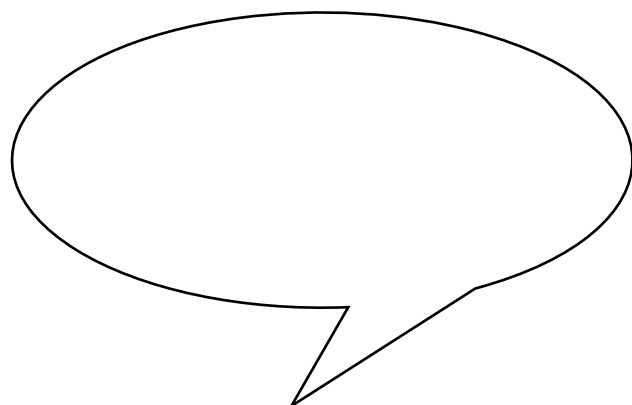


1. Say what the + and - and = signs in each of the these two sums are explaining

$$4 + 3 = 7$$



$$8 - 5 = 3$$

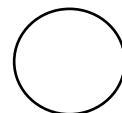


2. Use the + and - and = signs to write the what the words in the speech bubbles are saying.

5 add on 4 is equal to 9

7 take away 3 is equal to 4

Represent and use number bonds and related subtraction facts within 20



1. If all of the sums below have an answer of 20, write in the missing number for each of the sums

$$19 + \square = 20$$

$$17 + \square = 20$$

$16 + \square = 20$

$2 + \square = 20$

$1 + \square = 20$

$18 + \square = 20$

$14 + \square = 20$

$9 + \square = 20$

$15 + \square = 20$

$7 + \square = 20$

$8 + \square = 20$

$6 + \square = 20$

$20 + \square = 20$

$5 + \square = 20$

$13 + \square = 20$

$10 + \square = 20$

$12 + \square = 20$

$4 + \square = 20$

$0 + \square = 20$

$3 + \square = 20$

$11 + \square = 20$

2. Write into each box the number needed to make the sum correct

$20 - \square = 17$

$20 - \square = 19$

$20 - \square = 16$

$20 - \square = 15$

$20 - \square = 12$

$20 - \square = 11$

$20 - \square = 10$

$20 - \square = 13$

$20 - \square = 18$

$20 - \square = 14$

$20 - \square = 6$

$20 - \square = 5$

$20 - \square = 1$

$20 - \square = 3$

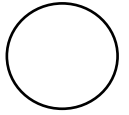
$20 - \square = 2$

$20 - \square = 4$

$20 - \square = 9$

$20 - \square = 7$

Add and subtract one-digit and two-digit numbers to 20, including 0



2. Write the answer to each of the sums the box after the equals sign

$2 + 3 = \square$

$4 + 2 = \square$

$5 + 2 = \square$

$6 + 3 = \square$

$8 + 4 = \square$

$9 + 5 = \square$

$12 + 7 = \square$

$15 + 3 = \square$

$7 - 4 = \square$

$8 - 6 = \square$

$9 - 3 = \square$

$10 - 3 = \square$

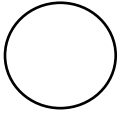
$12 - 7 = \square$

$17 - 9 = \square$

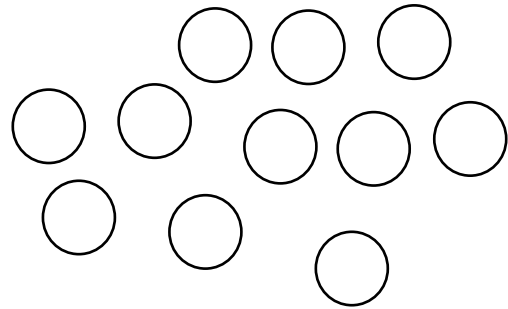
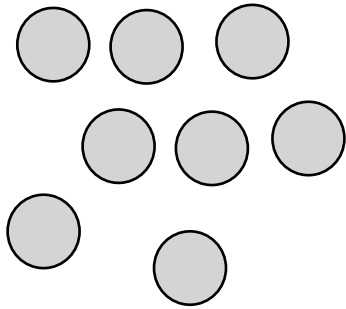
$19 - 14 = \square$

$18 - 11 = \square$

Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? -$



1. Write into each box the numbers in each of the boxes needed in the sum to work out the total number of counters



$$\square + \square = \square$$

2. Write into each box the number needed to make each of these sums correct

$$5 + \square = 7$$

$$3 + \square = 8$$

$$4 + \square = 11$$

$$9 + \square = 15$$

$$12 + \square = 19$$

$$8 - \square = 6$$

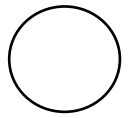
$$9 - \square = 3$$

$$12 - \square = 9$$

$$18 - \square = 8$$

$$19 - \square = 5$$

Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher



x	2	5	10
1	2	5	10
2	4	10	20
3	6	15	30
4	8	20	40
5	10	25	50
6	12	30	60
7	14	35	70
8	16	40	80
9	18	45	90
10	20	50	100

Use the 2, 5 and 10 times tables to workout the answers to these times sums

$$\begin{array}{r} 3 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 5 \\ \hline \end{array}$$

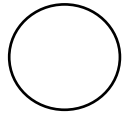
$$\begin{array}{r} 10 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 5 \\ \hline \end{array}$$

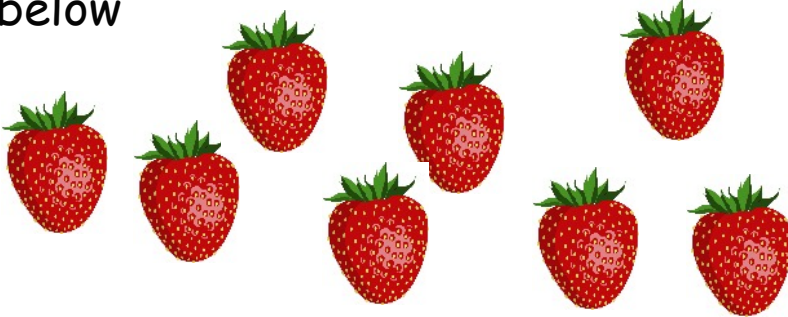
$$\begin{array}{r} 4 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 10 \\ \hline \end{array}$$

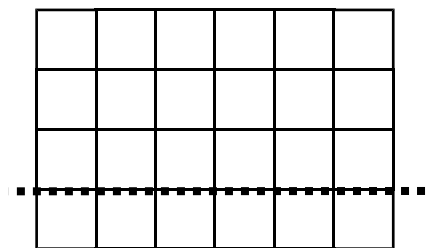
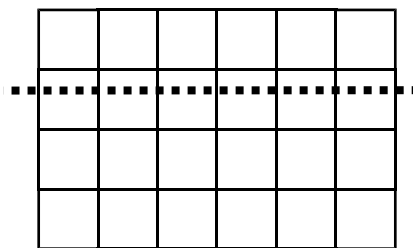
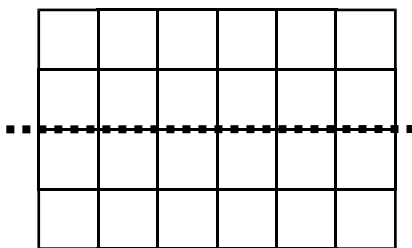
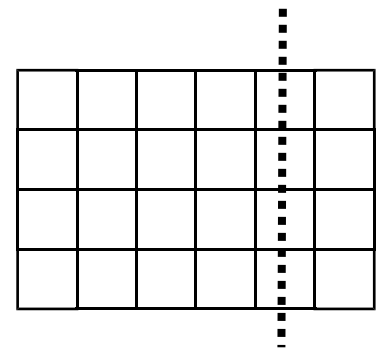
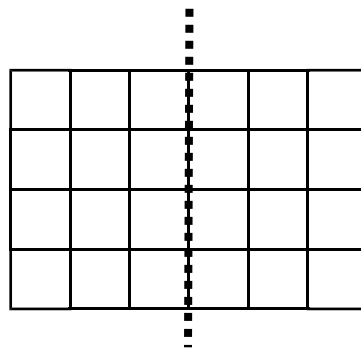
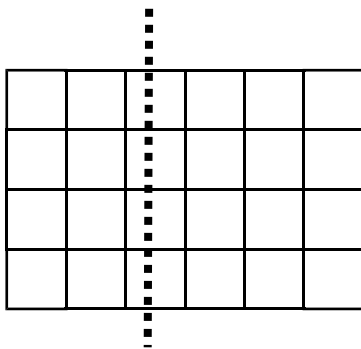
Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity



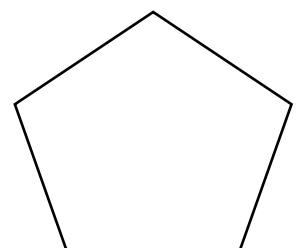
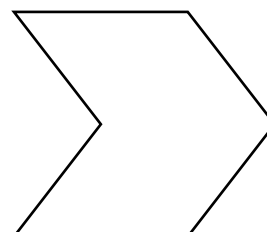
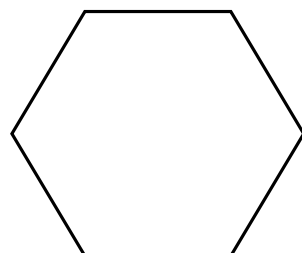
1. How many strawberries would you have if you had half of the strawberries shown below? Write your answer in the box below



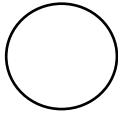
2. Colour the rectangles that have been cut into half by the dotted line



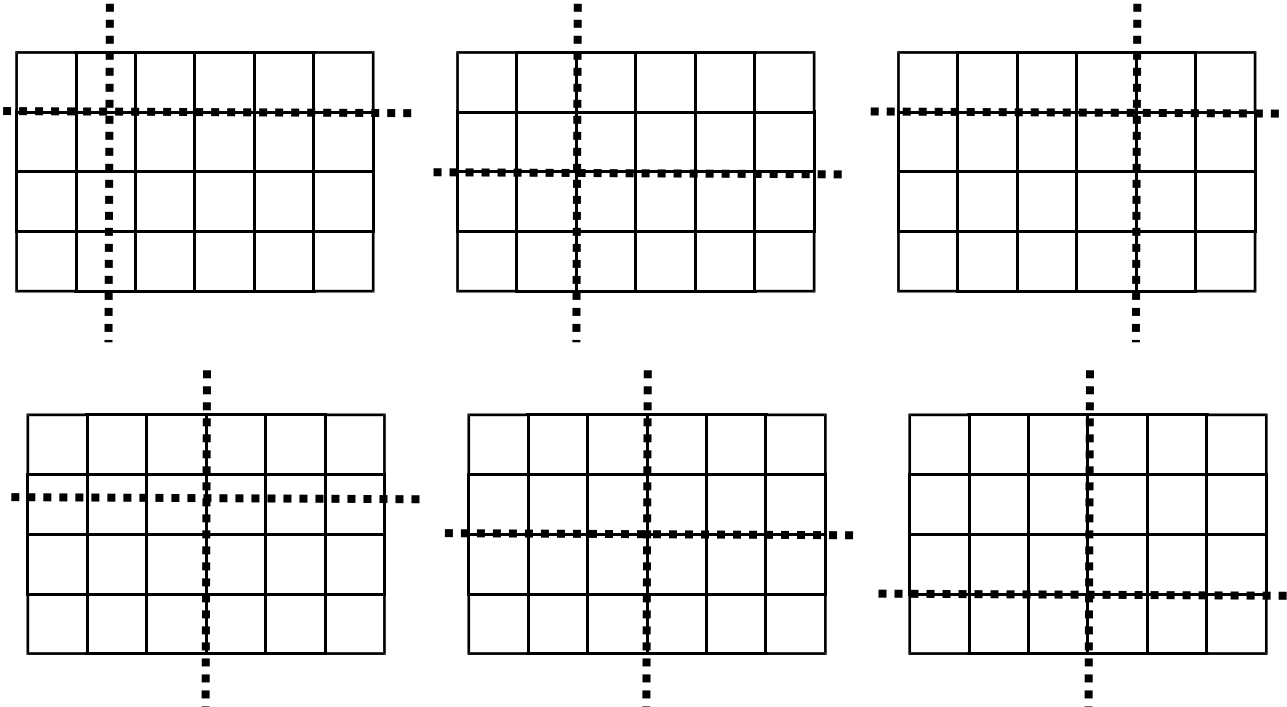
3. Draw a line on each of the shapes that cuts the shape into half



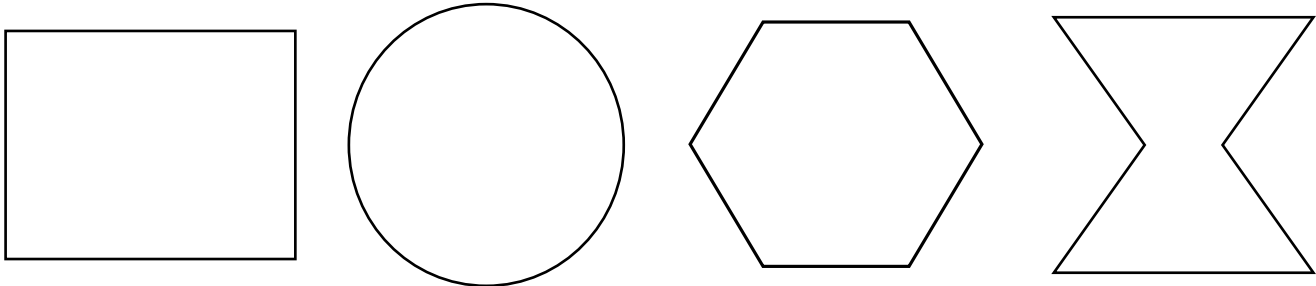
Recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity



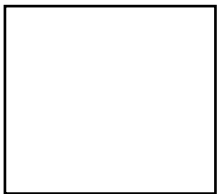
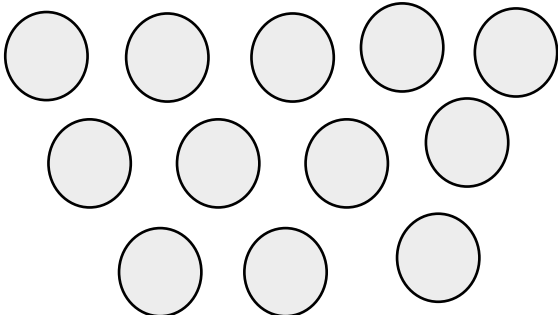
1. Colour the rectangle that has been cut into quarters by the dotted lines



2. Draw lines on each of the shapes that will cut each shape into into quarters, then colour in the quarters on each shape.

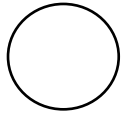


3. How many counters would there be in a group which was one quarter of this group of counters? Write your answer in the box.

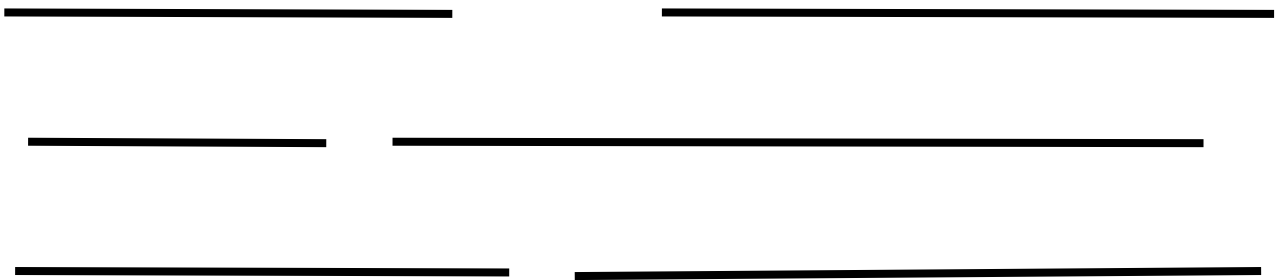


Compare, describe and solve practical problems for:

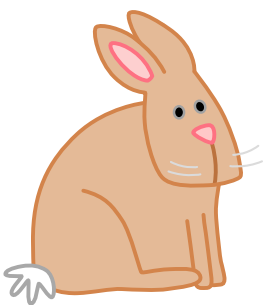
- lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
- mass/weight [for example, heavy/light, heavier than, lighter than]
- capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
- time [for example, quicker, slower, earlier, later]



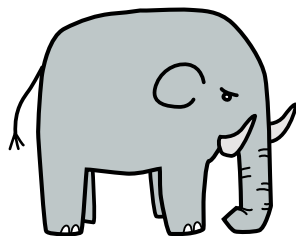
1. Write the number 1 on the shortest line and the number 6 on the longest line then use the numbers 2, 3, 4 and 5 to number the other lines into the correct order of their lengths.



2. Write the names of these animals into the boxes in the most probable order of their weights (masses) from the lightest to the heaviest.



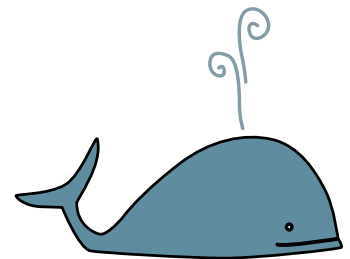
Rabbit



Elephant



Tiger



Whale

3. Here are five glasses of water.

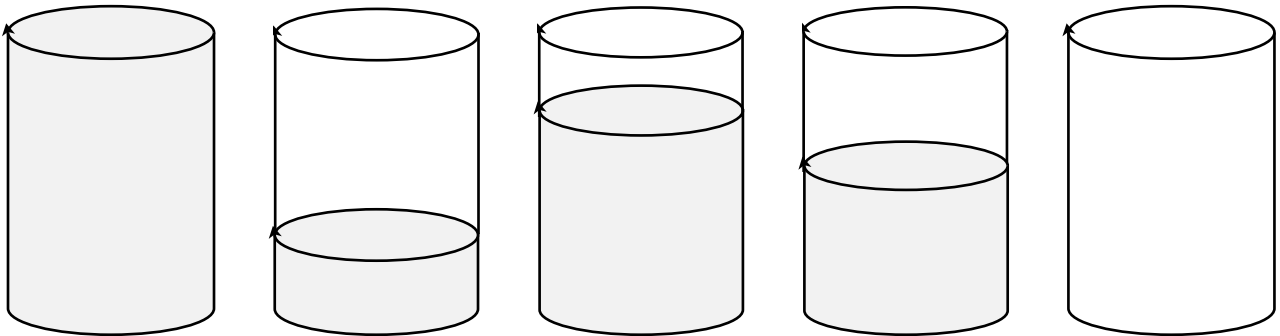
Write the word **full** against the glass that is full

Write the word **empty** against the glass that is empty

Put a $\frac{1}{2}$ on the glass that is looks to be half full

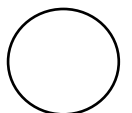
Put a $\frac{1}{4}$ on the glass that is looks to be half full

Put a $\frac{3}{4}$ on the glass that is looks to be three quarter full



Measure and begin to record the following:

- lengths and heights
- mass/weight
- capacity and volume
- time (hours, minutes, seconds)
- recognise and know the value of different denominations of coins and notes
- sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]
- recognise and use language relating to dates, including days of the week, weeks, months and years tell the time to the hour and half past the hour and draw the hands on a clock face to show these times



1. On the last page in this book, you will find some centimetre rulers. Cut these out and use one of the rulers to measure the lines and then write the length on each line on the next page. The first one has been done for you.

6 cm

cm

cm

cm

cm

cm

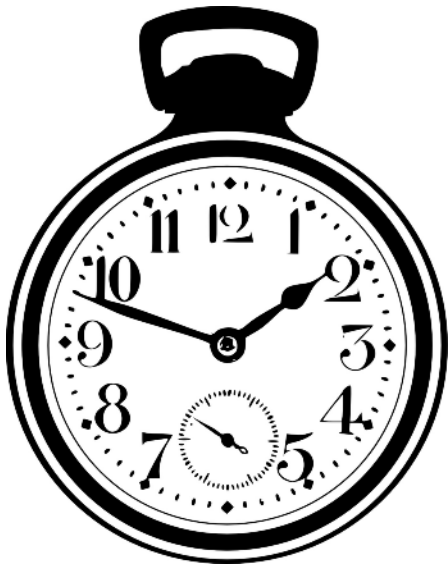
2. What is the total amount of money in each of the boxes?



3. A sausage in a roll (hot dog) costs 75p. If I've have the money shown, how much more do I need?



4. Fill in the blanks about the units of time



1 week = ___ days

1 day = ___ hours

1 hour = ___ minute

1 minute = ___ seconds

5. Write the days of the week starting with Sunday in the correct order.

Monday

Wednesday

Saturday

Friday

Thursday

Sunday

Tuesday

6 Write the seasons starting with spring in the correct order.

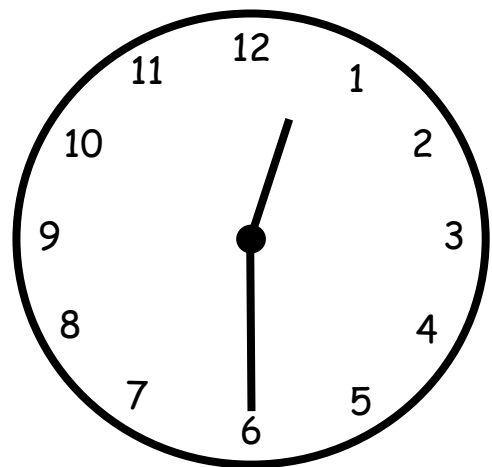
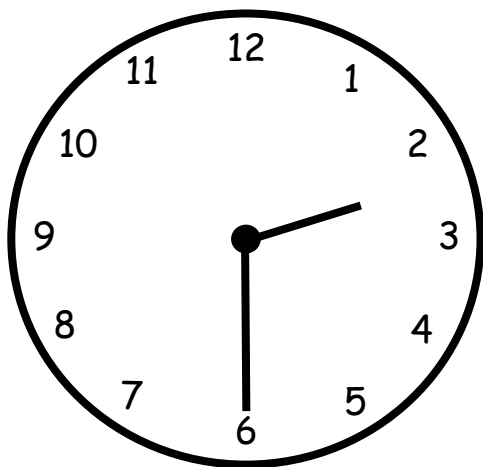
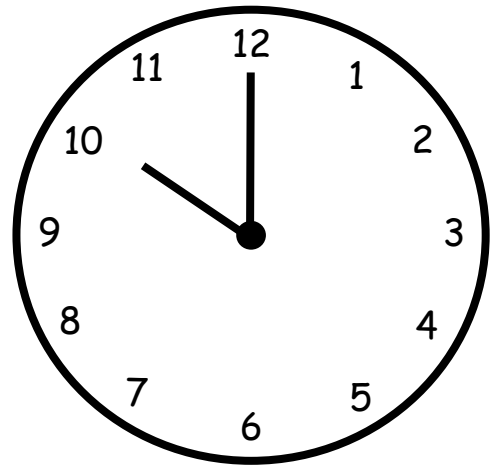
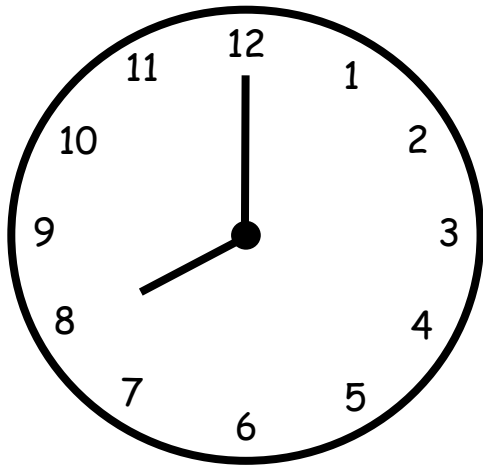
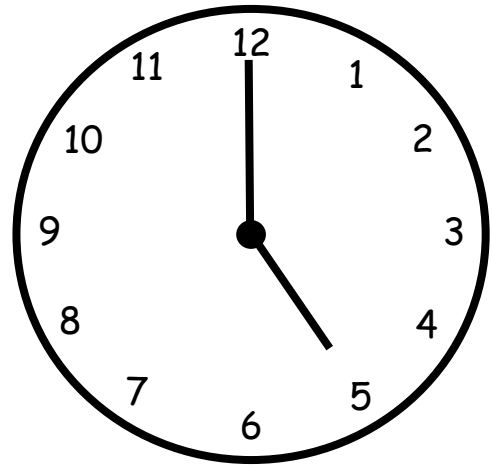
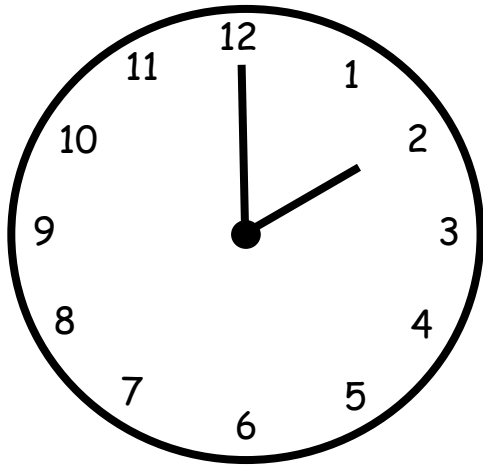
Summer

Winter

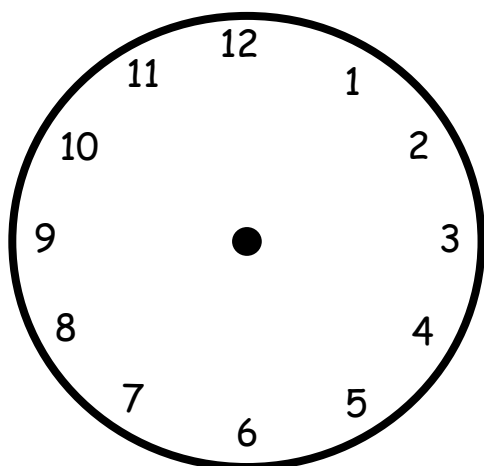
Autumn

Spring

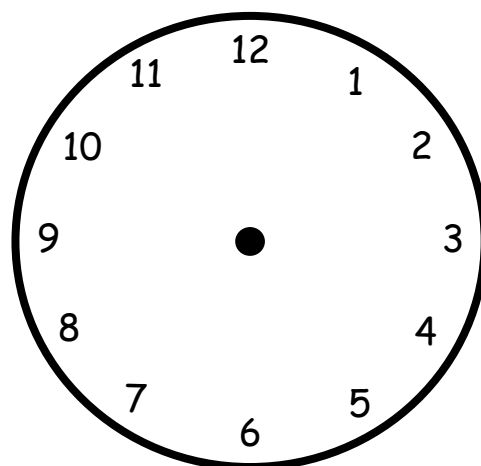
3. What times are each of these clocks showing?



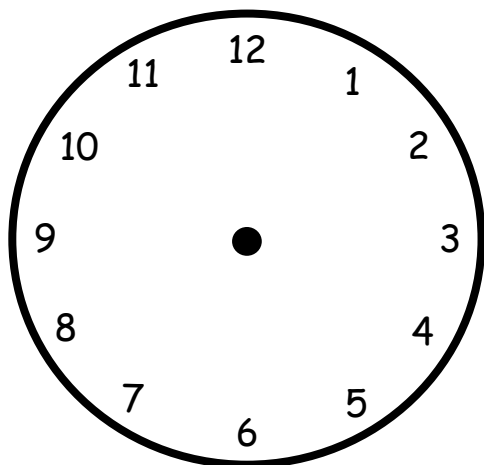
4. Draw fingers on each clock so that it shows the time written below each picture.



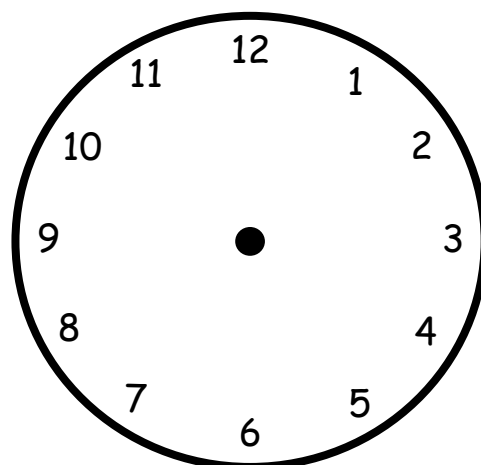
2 o'clock



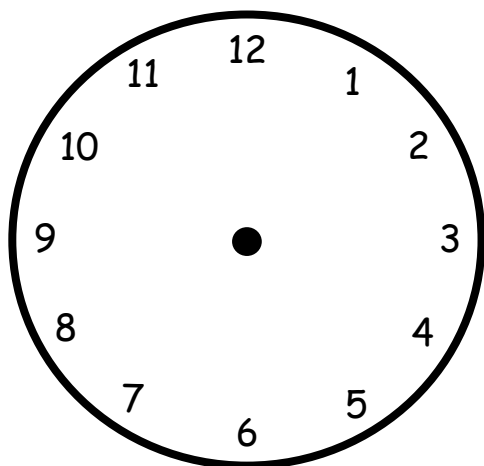
5 o'clock



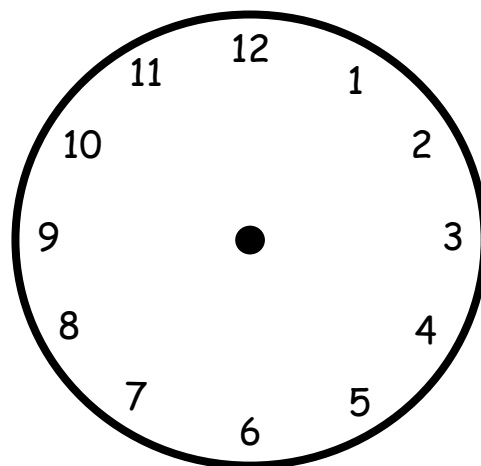
7 o'clock



11 o'clock



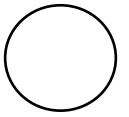
Half past one



Half past nine

Recognise and name common 2-D and 3-D shapes, including:

- 2-D shapes [for example, rectangles (including squares), circles and triangles]
- 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]



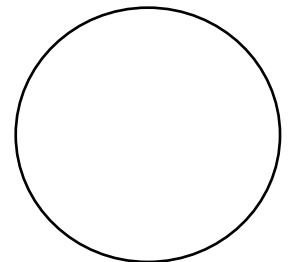
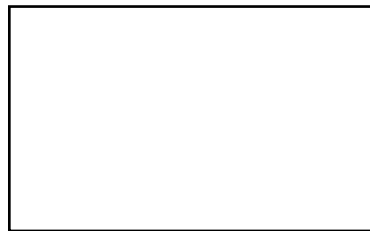
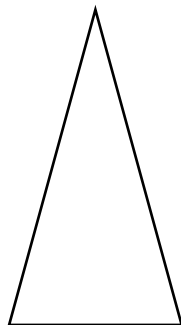
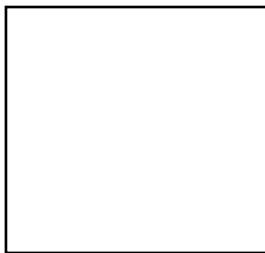
1. Draw a line that joins the name to its shape

Circle

Triangle

Square

Rectangle



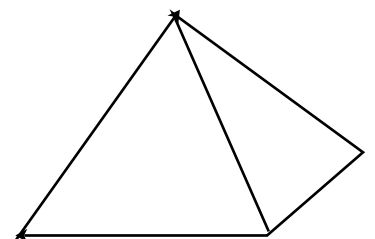
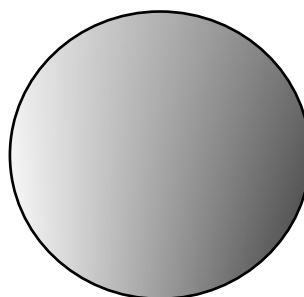
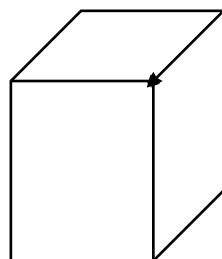
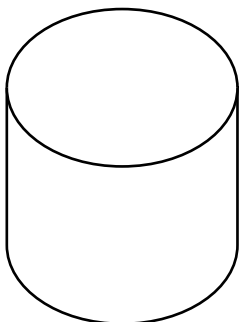
2. Draw a line that joins the name to its shape

Cuboid

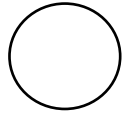
Pyramid

Sphere

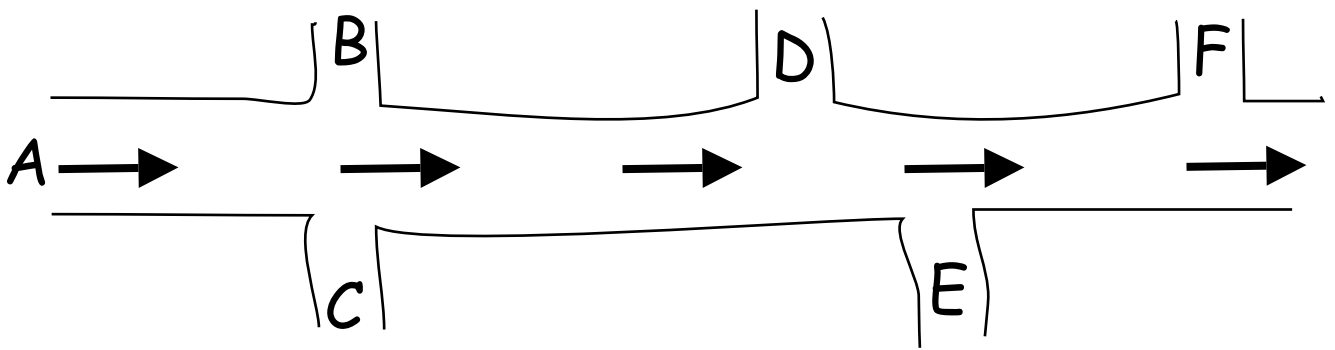
Cylinder



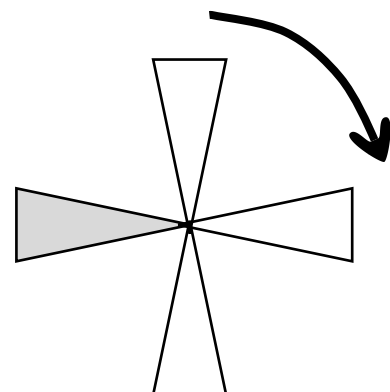
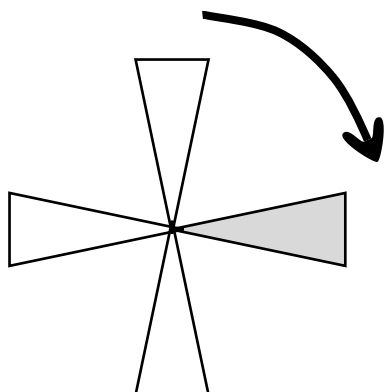
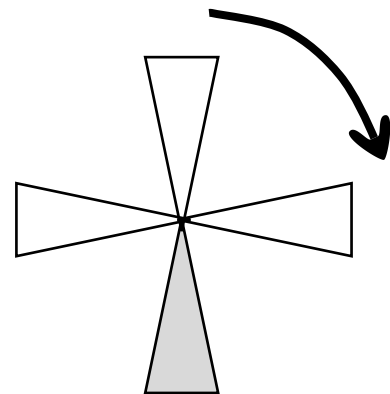
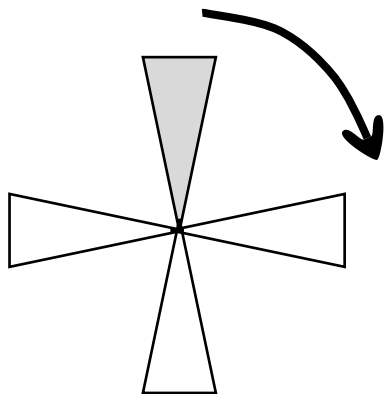
Describe position, direction and movement, including whole, half, quarter and three-quarter turns



1. Here is a map of a road. If you started at A and walked in the direction of the arrows which letter would you find at the second turn on the left?



2. Here are the four pictures of a windmill's sails. It starts with the grey sail at the top and the sails turn round once. Write $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$ next to the other pictures to show how much the windmill has turned



0 1 2 3 4 5 6 7 8 9 10 11 12

Centimetre Ruler

0 1 2 3 4 5 6 7 8 9 10 11 12

Centimetre Ruler

0 1 2 3 4 5 6 7 8 9 10 11 12

Centimetre Ruler

0 1 2 3 4 5 6 7 8 9 10 11 12

Centimetre Ruler

0 1 2 3 4 5 6 7 8 9 10 11 12

Centimetre Ruler

0 1 2 3 4 5 6 7 8 9 10 11 12

Centimetre Ruler

0 1 2 3 4 5 6 7 8 9 10 11 12

Centimetre Ruler

Simple 12 cm Rulers

By photocopying onto thin card and cutting on a guillotine, it is possible to make seven simple rulers. We hope that these will help with your lesson