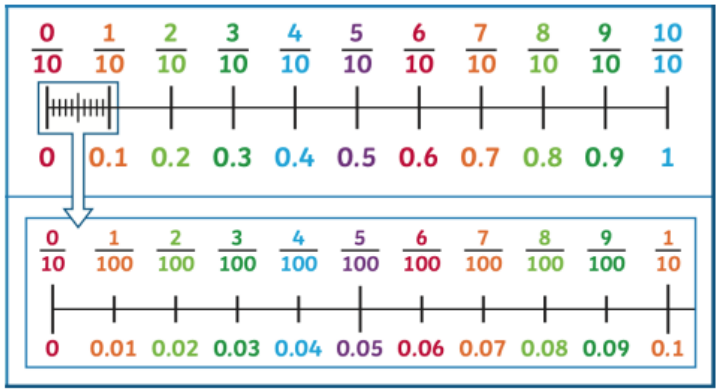
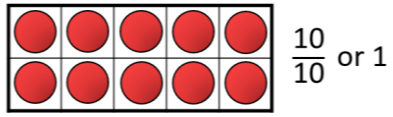
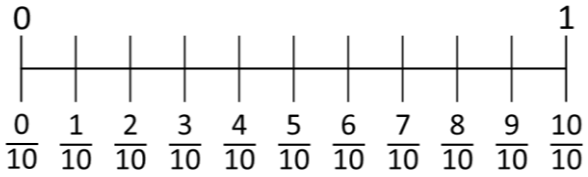
Year 4
Decimals A and Decimals B (Part 1)

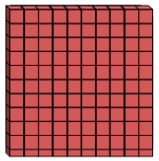
Tenths and hundredths



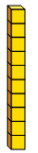


$\frac{10}{10}$ or 1



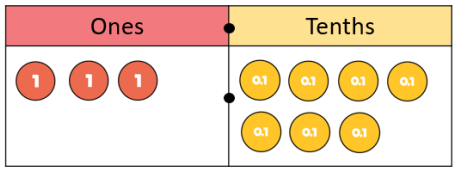


1 one $\frac{10}{10}$ $\frac{100}{100}$



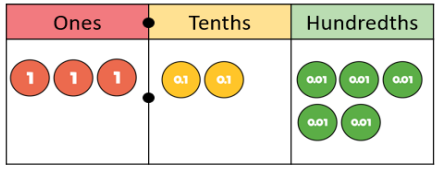
1 tenth $\frac{1}{10}$

1 hundredth $\frac{1}{100}$



There are 3 wholes and 7 tenths.

The number is 3.7



There are 3 ones.

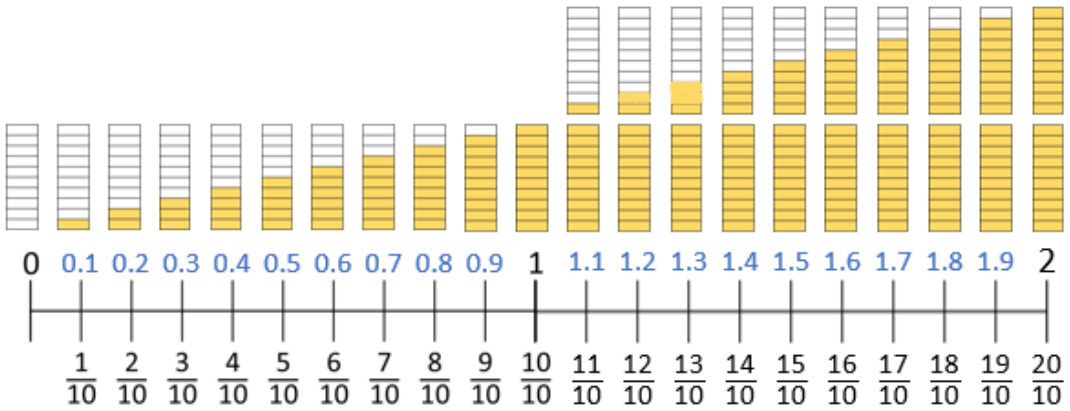
There are 2 tenths.

There are 5 hundredths.

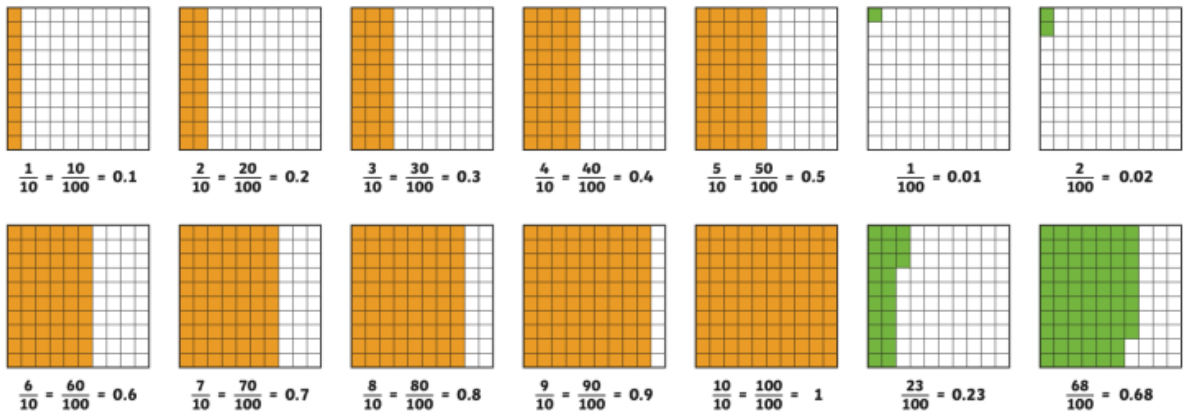
The number represented is 3.25

Vocabulary

Whole
tenths hundredths
decimal
partition
equal part
whole number
halves quarter
three quarters
value
zero place holder
digits
greater than less than
smaller
place value column
equivalent
rounding



Tenths and Hundredths equivalence



Year 4
Decimals A and Decimals B (Part 2)

Dividing by 10 and 100

Tens	Ones
8	5

÷ 10

÷ 10

Tens	Ones	Tenths
	8 •	5

÷ 10

Tens	Ones
8	5

÷ 100

÷ 100

Tens	Ones	Tenths	Hundredths
	0 •	8	5

÷ 100

Hundreds	Tens	Ones
	÷ 10 →	
	÷ 100 →	

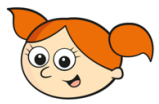
When dividing a number by 100, move all the digits _two_ places to the _right_ .

Alex uses the Gattegno chart to divide a different 2-digit number by 10
Here is her answer.

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9

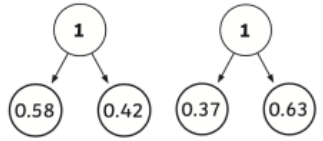
What was her original number?

$15 \div 10 = 1.5$

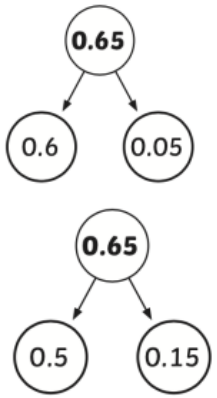


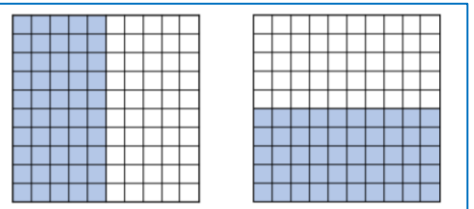
Walmsley C.E. Primary School
Where getting better never stops

Making a whole



Partitioning tenths and hundredths





$\frac{1}{2} = \frac{5}{10} = \frac{50}{100} = 0.5$

Fractions and decimal equivalence

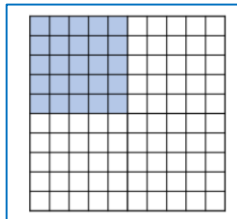
	= $\frac{1}{2}$	= 0.5
	= $\frac{1}{4}$	= 0.25
	= $\frac{3}{4}$	= 0.75
	= $\frac{1}{10}$	= 0.1

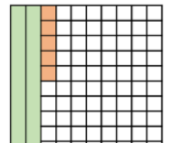
Rounding decimals

If the tenths digit is **1, 2, 3 or 4,** we round **down** to the nearest whole number.

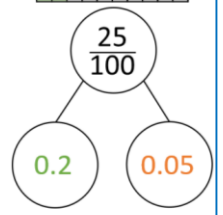
If the tenths digit is **5, 6, 7, 8 or 9,** we round **up** to the nearest whole number.

5. Round to the nearest ten pence		
£3.88	Rounds to	£3.90
£0.72	Rounds to	£0.70
Round to the nearest pound (£)		
£15.72	Rounds to	£16.00
£784.39	Rounds to	£784.00





$\frac{1}{4} = \frac{25}{100} = 0.25$



Year 4
Money

1p one penny | **2p** two pence | **5p** five pence | **10p** ten pence | **20p** twenty pence | **50p** fifty pence | **£1** one pound | **£2** two pounds

£5 five pound note | **£10** ten pound note | **£20** twenty pound note | **£50** fifty pound note

Pounds and pence

£3 and 25 pence **£3.25**

£52 and 13 pence **£52.13**

463 = £4.63

705p = £7.05

92p = £0.92

We can compare or order amounts by changing all amounts to either pounds or pence.

£4.82 ☐ 428p

£4.82 = 482p

482p > 428p

£4.82 > 428p

Order in ascending order:

516p	156p	£1.65	£6.51

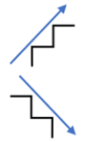
£1.65 = 165p and £6.51 = 651p

156p, £1.65, 516p, £6.51

What do these words mean?

Ascending → Smallest to greatest

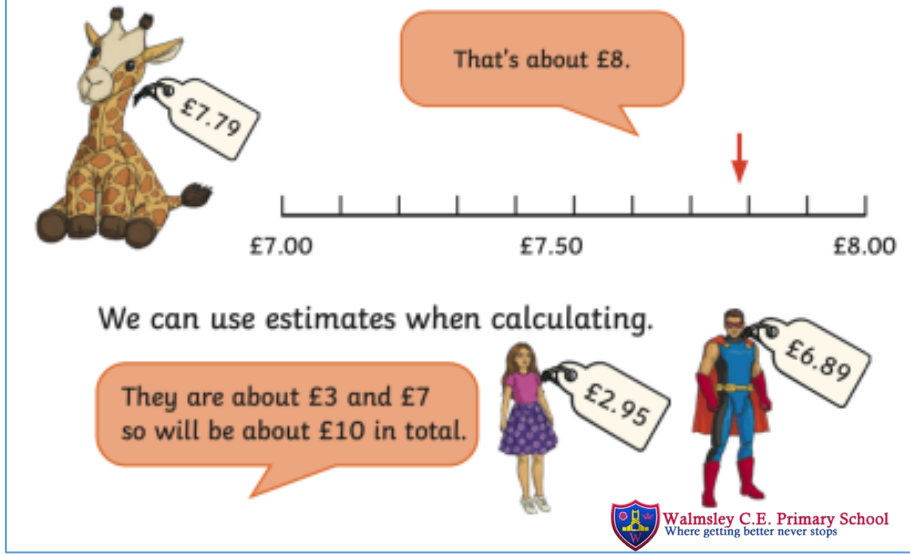
Descending → Greatest to smallest



Vocabulary

pounds
pence
compare
estimate
partition
value
approximately
ascending
descending

Estimating money



Year 4 Time

60 seconds	=	1 minute
60 minutes	=	1 hour
24 hours	=	1 day
7 days	=	1 week
4 weeks	=	1 month
12 months	=	1 year
10 years	=	1 decade
100 years	=	1 century
1,000 years	=	1 millenium

Month	Number of days
January	31
February	28 or 29
March	31
April	30
May	31
June	30
July	31
August	31
September	30
October	31
November	30
December	31

30 days has September,
April, June and November,
All the rest have 31
Except February, 28 days here
Or 29 in each leap year.

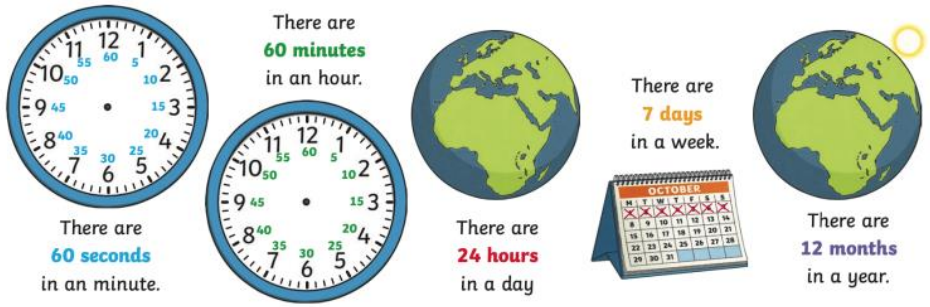
There are 24 hours in a day.

24-hour time

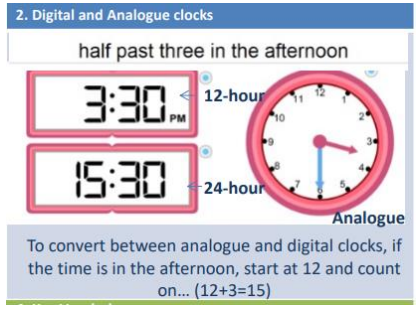
Vocabulary

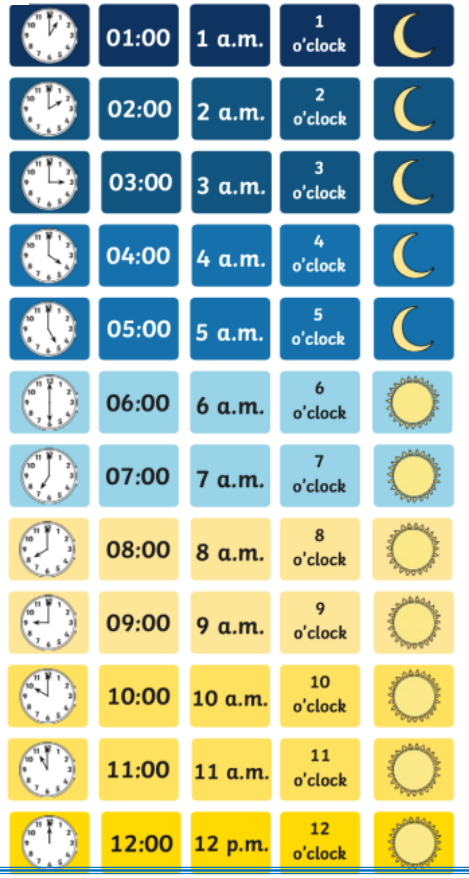
years
leap year
months weeks days fortnight
hours minutes seconds
morning am
afternoon pm
duration
analogue digital
24 hour
noon
midnight earlier later

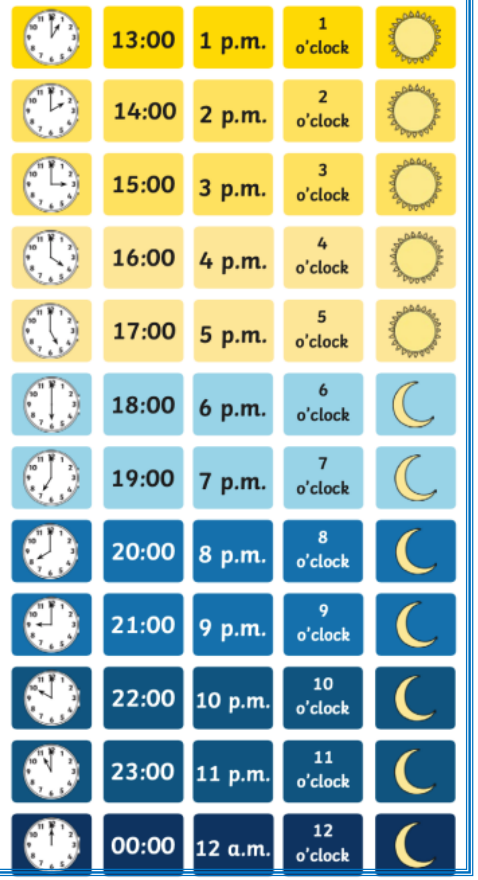
Durations of time



Analogue and digital clocks





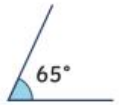


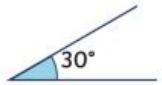
Year 4
Shape

Angles

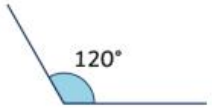
Right angle
The intersection of perpendicular lines creates a right angle.

Acute angle
Any angle measuring more than 0 degrees and less than 90 degrees is acute.



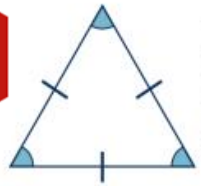


Obtuse angle
Any angle measuring more than 90 degrees but less than 180 degrees is obtuse.



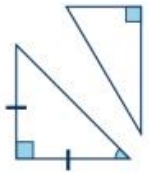
Triangles

Triangles have 3 sides and 3 vertices. The total of the angles in a triangle is 180°.



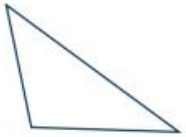
An equilateral triangle is a regular polygon. It has sides of equal length and each angle is 60°.

An isosceles triangle has two sides of equal length and two angles of equal size.

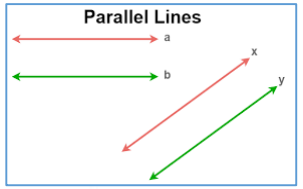


A right-angled triangle always has one 90° angle.

It can be isosceles or scalene.

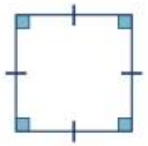


A scalene triangle has no equal sides or angles.

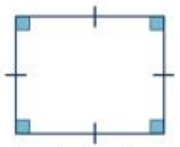


Quadrilaterals

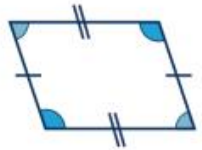
A quadrilateral is a polygon with four sides.



A square has four sides of equal length and four right angles (90°). A square is also a rectangle, a rhombus and a parallelogram.

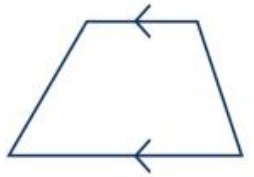


A rectangle has two pairs of parallel, equal sides and four right angles. A rectangle is also a parallelogram.

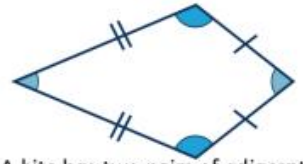


A parallelogram has two pairs of parallel, equal sides and opposite equal angles.

A rhombus has four sides of equal length and opposite equal angles. A rhombus is also a parallelogram.



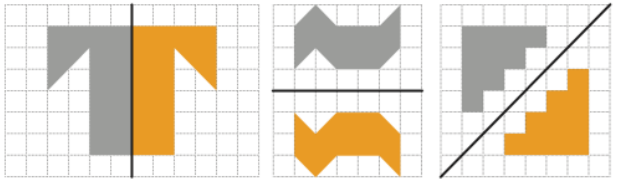
A trapezium only has one pair of opposite parallel sides.



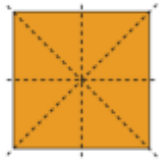
A kite has two pairs of adjacent equal sides and one pair of opposite equal angles.

Lines of symmetry

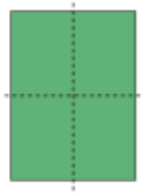
Patterns and shapes can be reflected in a mirror line. Mirror lines can be vertical, horizontal or diagonal.



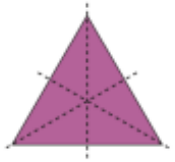
A square has four lines of symmetry.



A rectangle has two lines of symmetry.

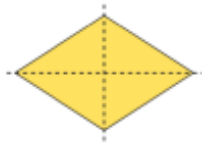


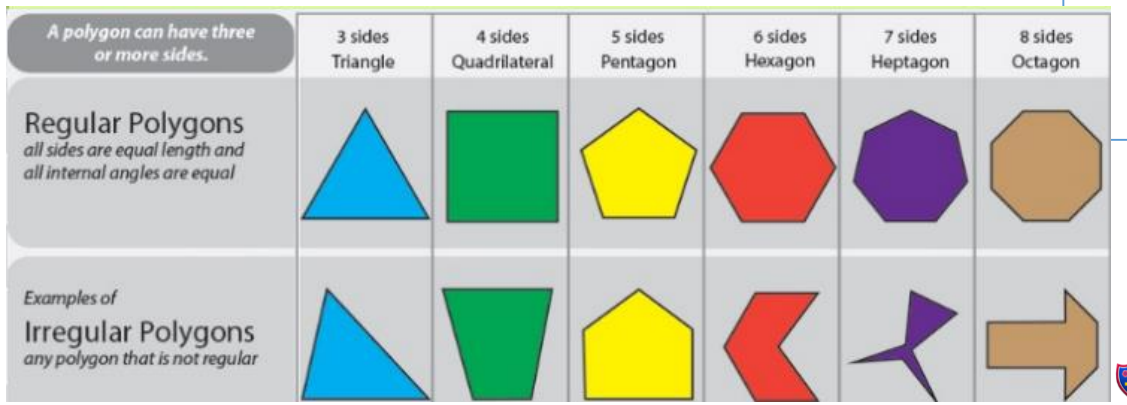
An equilateral triangle has three lines of symmetry.



An isosceles triangle has one line of symmetry.

A rhombus has two lines of symmetry.





Vocabulary

Angle
turn
clockwise
anti-clockwise
full/half/quarter
acute obtuse
right angle
triangle
rectangle
square
pentagon
hexagon
octagon
equilateral
isosceles
scalene polygon
regular
irregular
quadrilateral
parallel sides
perimeter
line of symmetry
symmetrical
horizontal
vertical
mirror line
vertex
vertices

Year 4 Statistics

Discreet and continuous data

Data that is counted in whole numbers is discrete. In discrete data, values between whole numbers cannot be counted.
Data that is measured and therefore can take an infinite values is continous. In continuous data, values between whole numbers can be counted.

Frequency tables

Tally marks are used to help count things. Each vertical line represents one unit. The fifth tally mark goes across the first four to make it easier to count.

The frequency column is completed after all the data has been collected.

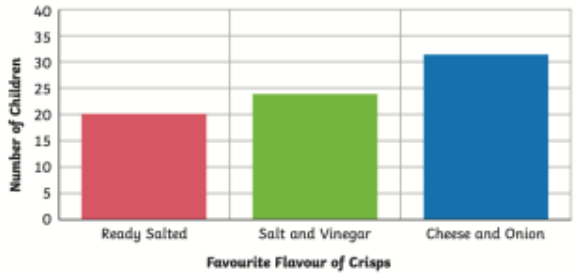
Eye Colour	Tally	Frequency
brown	𝍸 |	6
blue	𝍸 |||	8
green	|||	3
grey	|||	4
hazel	𝍸	5

Bar charts

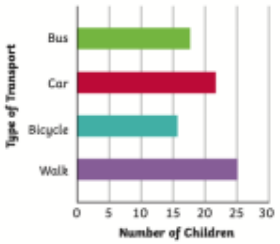
A bar chart has a horizontal axis and a vertical axis. Bars are used to show the data of each category. There must be a gap between each bar.

The scale of the bar chart is based on the range of data.

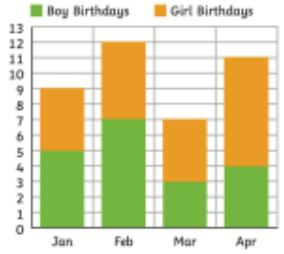
The scale on this bar chart counts in fives.



The bars are horizontal on this bar chart.



Two sets of data are shown on this stacked bar chart.

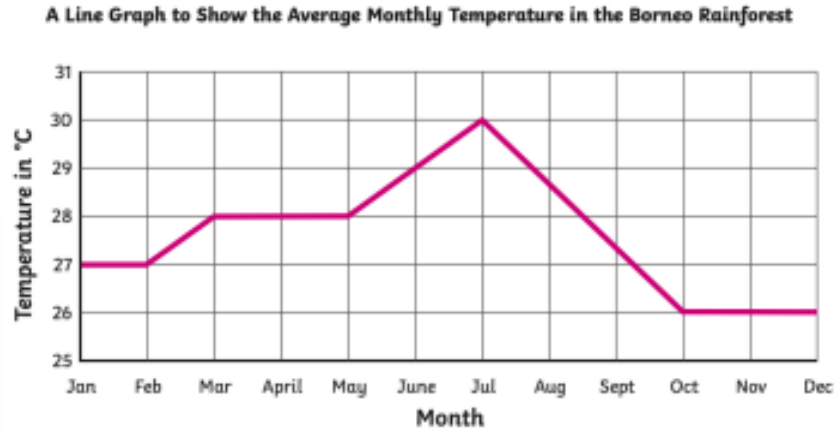


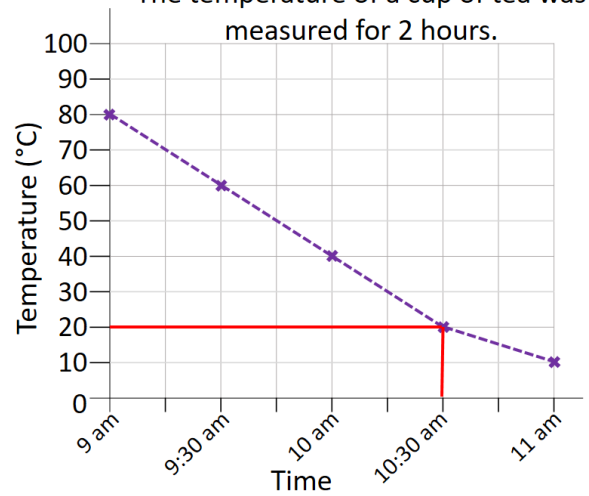
Pictograms

Player	Goals scored
Alex	⚽
Jack	⚽
Mo	⚽ ⚽ ⚽
Rosie	⚽ ⚽ ⚽
Whitney	⚽

Key ⚽ = 4 goals

Line graphs





What was the time when the tea was 20 degrees?

10:30 am

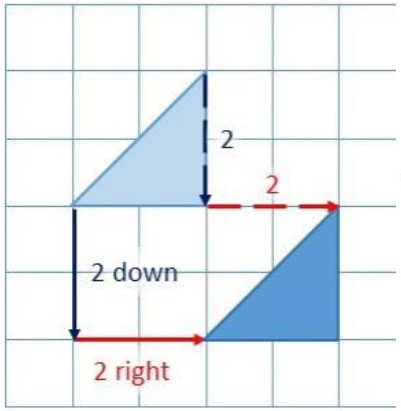
Vocabulary

data
sum
scale
difference
bar chart
line graph
represent
horizontal axis
vertical axis
pictogram
symbol
value

Walmsley C.E. Primary School
Where getting better never stops

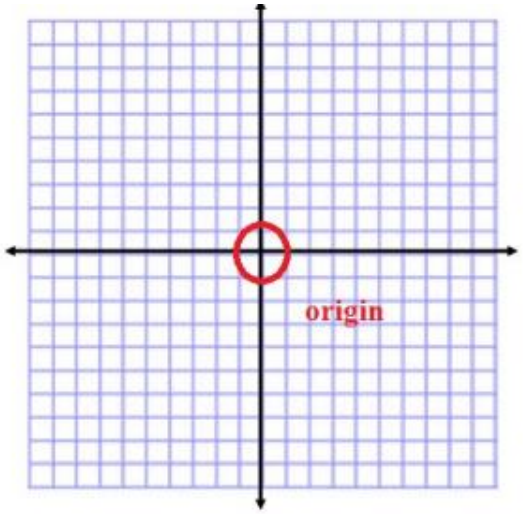
Year 4
Position and Direction

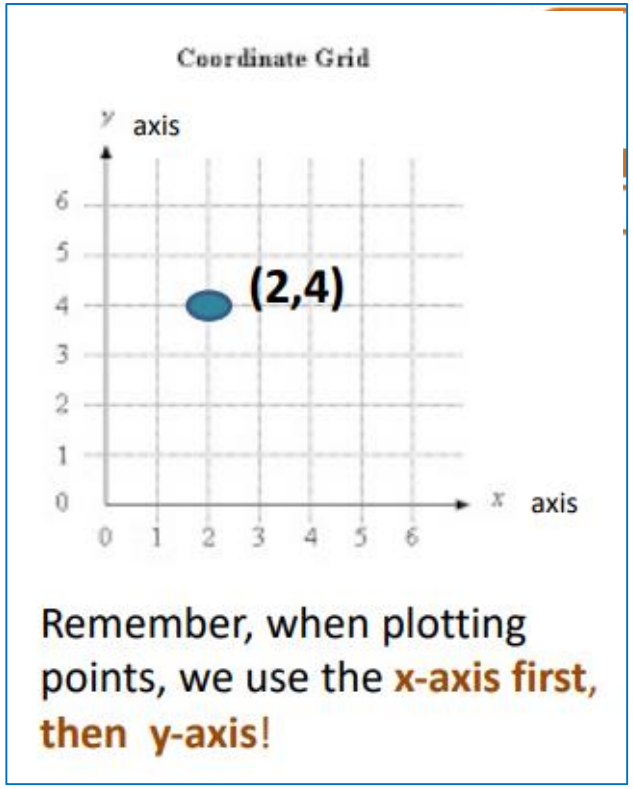
Translation



Points can be translated **up**, **down**, **left** and **right**

Coordinates

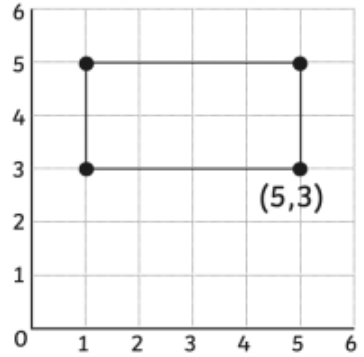


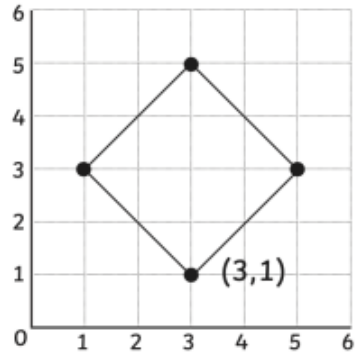


Remember, when plotting points, we use the **x-axis first, then y-axis!**

Plotting 2d shapes

Each vertex (corner) of a 2D polygon can be represented as a co-ordinate on a 2D grid.





Vocabulary

Position
direction
coordinates
point
2D shapes
(triangles
square
rectangle
pentagon
hexagon
octagon)
translate
translation up
down left
right vertex
vertices
horizontal
vertical
x axis y axis
polygon

To help you remember which point to read or write first, simply remember to move 'along the corridor and up the stairs.'

In other words, move on the x-axis and then move on the y-axis.