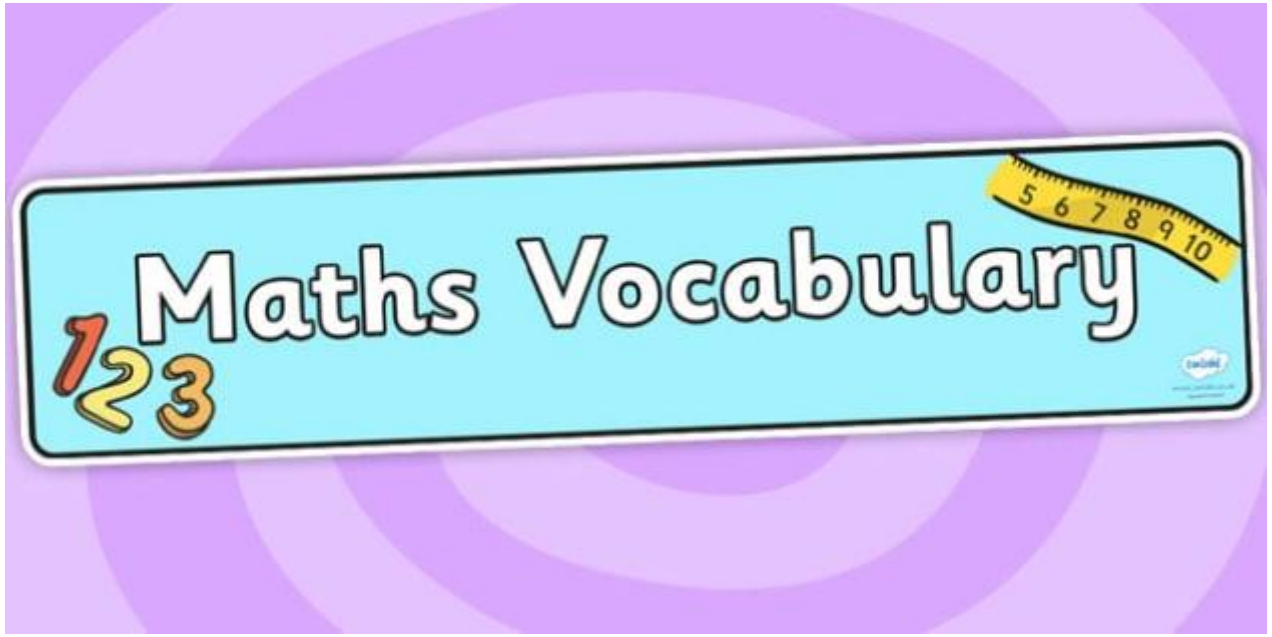

Key vocabulary for Year 4 Maths learning.

Year 4 Addition and Subtraction

Addition: Column Method

1

7349
+6785
_____

Place the numbers one on top of the other, lining up the thousands, hundreds, tens and ones.

2

7349
+6785
4

Add the ones and write the answer.

3

7349
+6785
4
1

Carry any tens to the tens column.

4

7349
+6785
34
1 1

Add the tens including any tens you have carried. Carry any hundreds to the hundreds column.

5

7349
+6785
134
1 1

Add the hundreds including any hundreds you have carried.

6

7349
+6785
14134
111

Add the thousands including any thousands you've carried.

7

7349
+6785
14134
111

Check your answer.

Subtraction: Column Method

1

5346
-2747
_____

Place the numbers one on top of the other, lining up the thousands, hundreds, tens and ones. Subtract the ones (the answer to 6 – 7 is negative).

2

5 3 4 6
3 1
-2747
9

Exchange a 10 from the 40 to give 16 ones.
Subtract the ones: 16 – 7 = 9.

3

5 2 3 4 6
2 13 1
-2747
99

Subtract the tens (the answer to 30 – 40 is negative). Exchange a 100 from the 300 to give: 130 – 40 = 90.

4

5 3 4 6
4 12 13 1
-2747
599

Subtract the hundreds (the answer to 200 – 700 is negative). Exchange a 1000 from the 5000 to give: 1200 – 700 = 500.

5

5 3 4 6
4 12 13 1
-2747
2599

Subtract the thousands: 4000 – 2000 = 2000.

6

5346
-2747
2599

Check your answer.

Inverse operations

1230 + 3589 = 4819

3589 + 1230 = 4819

4819 - 1230 = 3589

4819 - 3589 = 1230

inverse	addition	altogether	take away
operation	more	subtract	minus
opposite	plus	take	remove
reverse	increase	difference	fewer
backwards	sum	how many less	decrease

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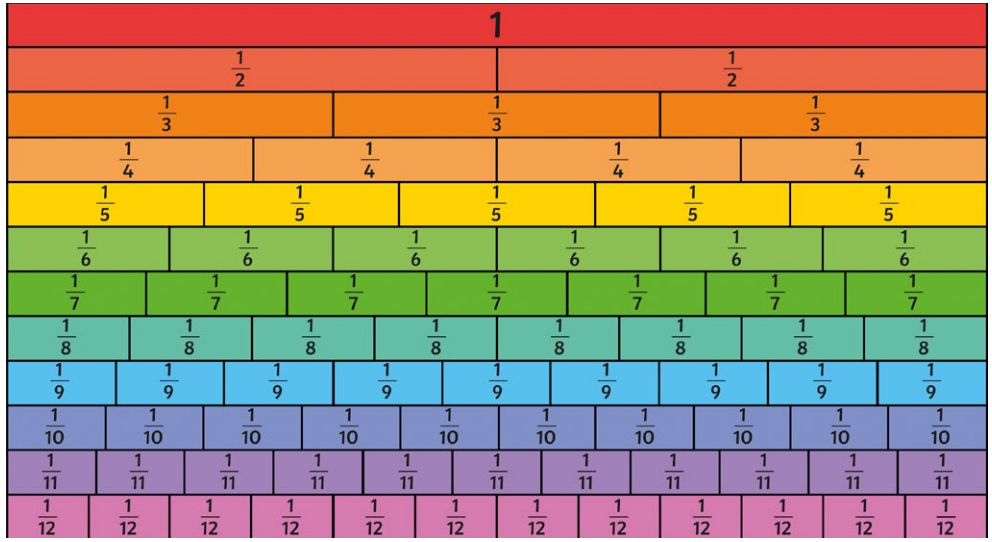
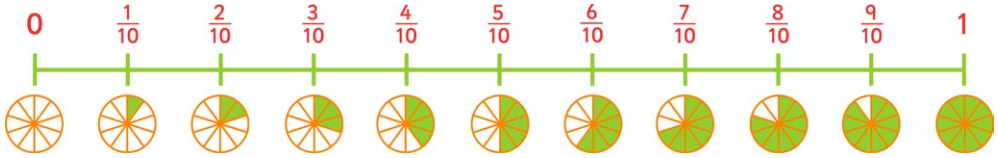
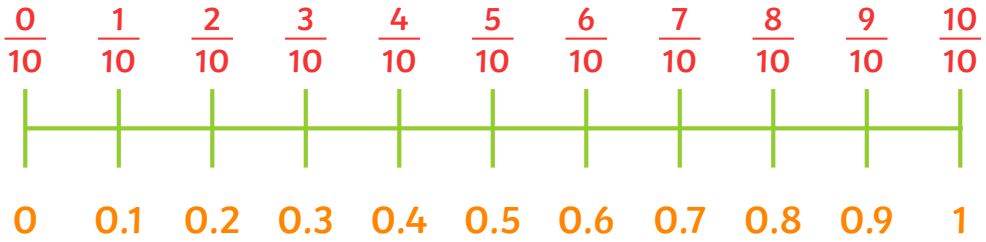
Year 4 Fractions







Decimal Square 0.01 to 1

0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1

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Year 4 Fractions

Hundredths Number Square

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

Tenths and Hundredths Place Value Grid				
Hundreds	Tens	Ones	Tenths	Hundredths

numerator → 1/10

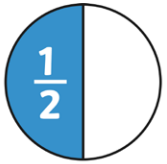
denominator → 1/10

tenth

equivalent fraction $\frac{1}{2} = \frac{2}{4}$

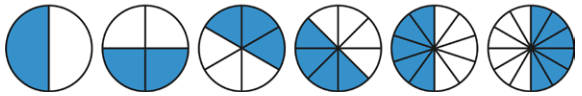
hundredth 15.39

decimal 178.05



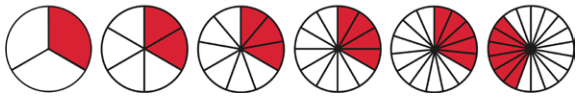
is equal to...

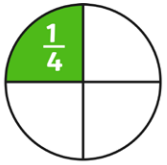
$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12}$



is equal to...

$\frac{1}{3} = \frac{2}{6} = \frac{3}{9} = \frac{4}{12} = \frac{5}{15} = \frac{6}{18}$





is equal to...

$\frac{1}{4} = \frac{2}{8} = \frac{3}{12} = \frac{4}{16} = \frac{5}{20}$

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Year 4 Measurement

Capacity

1 litre = 1000 millilitres

1 centilitre = 10 millilitres

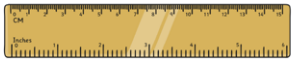
l
cl
ml

Length

1 kilometre = 1000 metres

1 metre = 100 centimetres

1 centimetre = 10 millimetres



km
m
cm
mm

Currency

1 pound = 100 pence

£
p

Time

1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

h
min
s

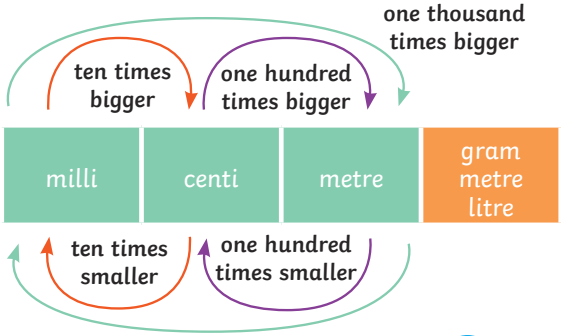
Mass

1 tonne = 1000 kilograms

1 kilogram = 1000 grams

1 gram = 1000 milligrams

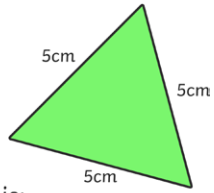
t
kg
g
mg

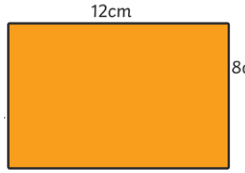


12-hour time	24-hour time	12-hour time	24-hour time
12am (midnight)	00:00	12pm (noon)	12:00
1am	01:00	1pm	13:00
2am	02:00	2pm	14:00
3am	03:00	3pm	15:00
4am	04:00	4pm	16:00
5am	05:00	5pm	17:00
6am	06:00	6pm	18:00
7am	07:00	7pm	19:00
8am	08:00	8pm	20:00
9am	09:00	9pm	21:00
10am	10:00	10pm	22:00
11am	11:00	11pm	23:00

Finding the Perimeter

The **perimeter** of this triangle is:
5cm + 5cm + 5cm = **15cm**

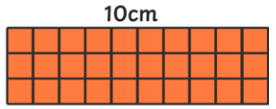




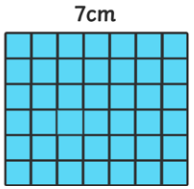
The **perimeter** of this rectangle is:
12cm + 12cm + 8cm + 8cm = **40cm**

Finding the Area: Rectangle

The area:
10cm × 3cm
= 30cm²



The area:
7cm × 6cm
= 42cm²



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Year 4 Multiplication and Division

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Multiplication

multiply
times
groups of
lots of
repeated addition
product
multiplied by

Division

group
grouping
sharing
half
halves
share equally
equal groups

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Multiplication Strategies

Expanded Column Method

Line up the ones and the tens.
Multiply the ones.
Multiply tens.
Add the totals together.

	42	
×	6	
	12	(2 × 6)
	240	(40 × 6)
	252	

42 × 6 = 252

Multiplication Magic

60 × 4

Draw the wizard's hat to find the facts to calculate

6 × 4 = 24

Multiply the answer by 10/100/1000

6 0 × 4

Write your final answer

60 × 4 = 240

Year 4 Number and Place Value

Counting in multiples of 6

6	12	18	24
30	36	42	48
54	60	66	72

Counting in multiples of 7

7	14	21	28
35	42	49	56
63	70	77	84

Counting in multiples of 9

9	18	27	36
45	54	63	72
81	90	99	108

1000 less than		1000 more than
249	1,249	2,249
2,380	3,380	4,380
5,013	6,013	7,013
9,424	10,424	11,424

Roman Numerals

I = one

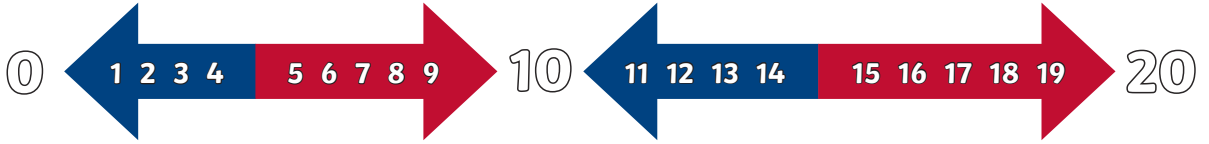
V = five

X = ten

L = fifty

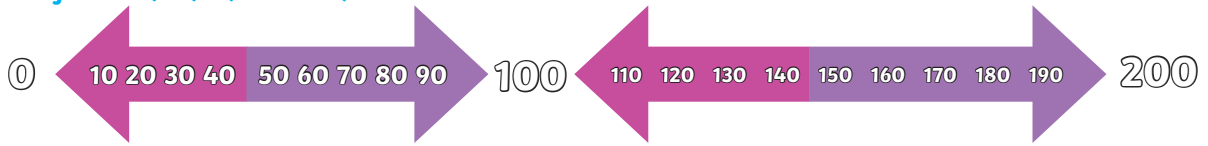
C = hundred

If the ones digit is 1, 2, 3 or 4, leave the ten just as before.
If it's 5, 6, 7, 8 or 9, round UP to the next ten on the number line.



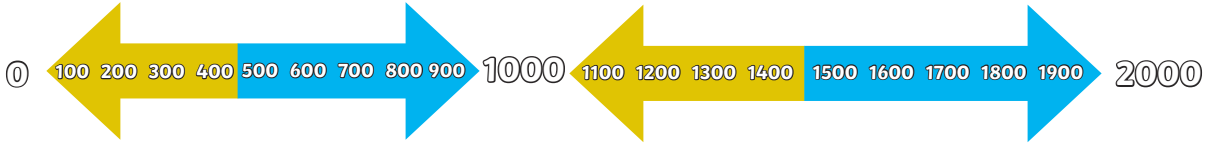
Rounding to 10

If the tens digit is 1, 2, 3 or 4, leave the hundred just as before.
If it's 5, 6, 7, 8 or 9, round UP to the next hundred on the number line.



Rounding to 100

If the hundreds digit is 1, 2, 3 or 4, leave the thousand just as before.
If it's 5, 6, 7, 8 or 9, round UP to the next thousand on the number line.



Rounding to 1000

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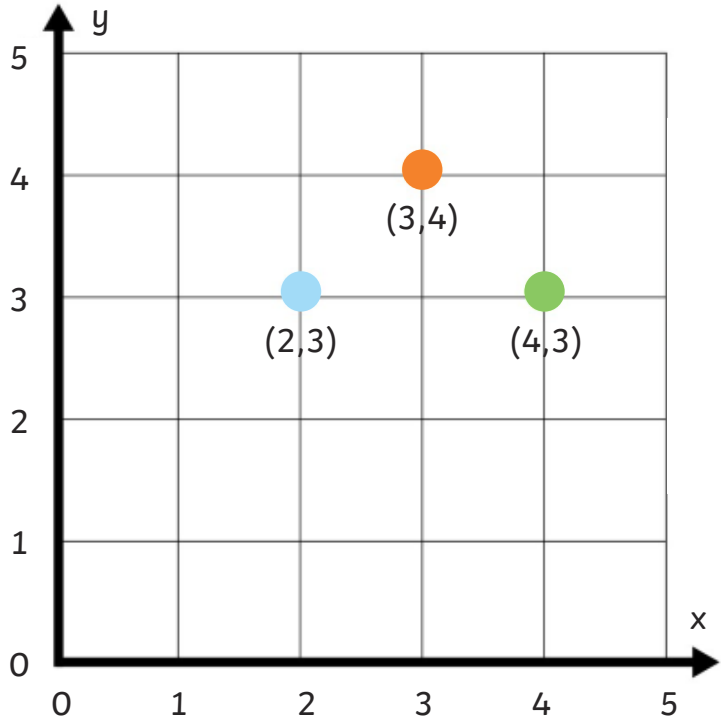
Year 4 Position and Direction

The x-axis coordinate always comes first, with the y-axis coordinate after it. Just like in the alphabet, x comes before y!



Left

Right

Up

Down

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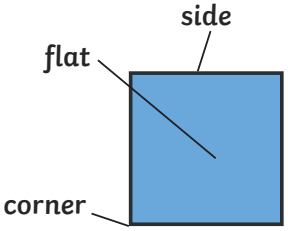
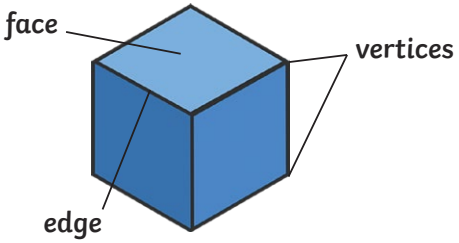
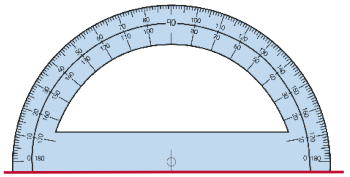
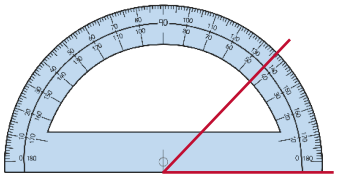
Year 4 Properties of Shape



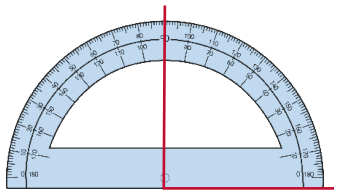




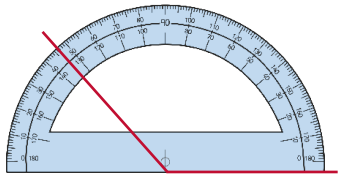
straight angle



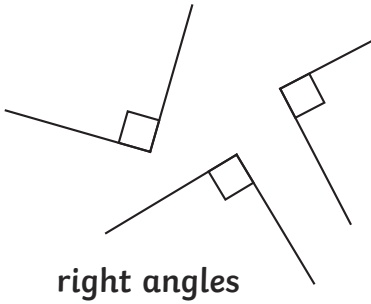
acute angle



right angle

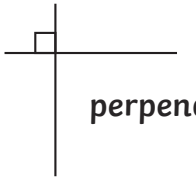


obtuse angle



right angles

parallel



perpendicular

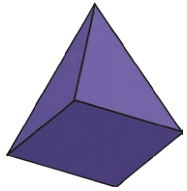
Symmetry

vertical line of symmetry

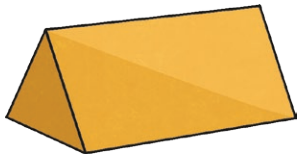
horizontal line of symmetry

diagonal line of symmetry

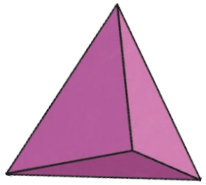
reflective symmetry



square-based pyramid

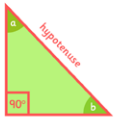


triangular prism

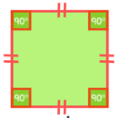


triangular-based pyramid

Triangles and Quadrilaterals

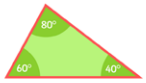


right-angled triangle

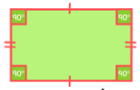


regular square

isosceles triangle



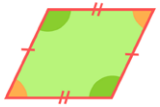
scalene triangle



rectangle quadrilateral

kite irregular

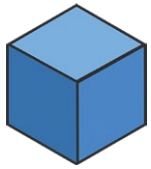
equilateral triangle



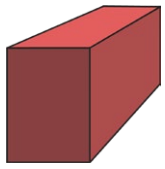
parallelogram

rhombus

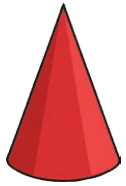
trapezium



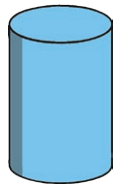
cube



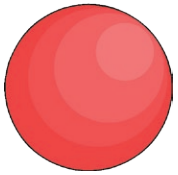
cuboid



cone



cylinder



sphere

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Year 4 Statistics

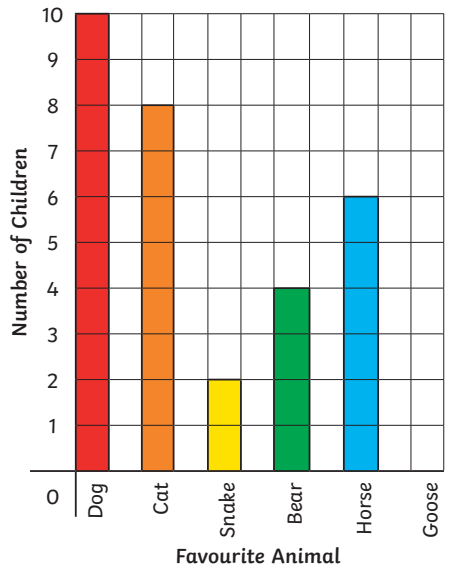
Bar Chart

A bar chart is used to clearly display results and information.

Types of items are shown on the x-axis, which is horizontal.

The number of items are shown on the y-axis, which is vertical.

One block represents one item. It is quicker to compare results using a block diagram than a table or tally chart.



Carroll Diagram

A Carroll diagram is a table used for sorting objects based on whether they do or do not meet two given criteria.

Carroll diagrams were invented by Lewis Carroll, the author of 'Alice in Wonderand'.

	Red	Not Red
Quadrilateral		
Not a Quadrilateral		

Table

A table is used to record information and collect results.

The information can then be used to make pictograms or block diagrams to display results clearly.

A table needs to have headings to show what you are measuring or recording.

Favourite Animal	Number of Children
Dog	10
Cat	8
Snake	2
Bear	4
Horse	6
Goose	0

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Year 4 Statistics

Tally Chart

A tally chart is used for counting how many of something you are recording.

1 tally mark shows you that there is 1 item.

4 tally marks with a diagonal line through them show you that there are 5 items.

In this example, the tally marks show how many children chose each of the animals as their favourite in a survey.

Making a tally chart is faster than writing out words or numbers.

Favourite Animal	Number of Children	Frequency
Dog	𝍸 𝍸	10
Cat	𝍸 |||	8
Snake	||	2
Bear	||||	4
Horse	𝍸 |	6
Goose		0

Pictogram

A pictogram uses pictures to represent data.

It is quicker and easier to interpret the results in a pictogram than in a table or tally chart.

Pictograms are set out in a similar way to bar charts, but instead of bars they use columns of pictures to show specific amounts.

Favourite Animal	Number of Children
Dog	
Cat	
Snake	
Bear	
Horse	
Goose	

= 2 children

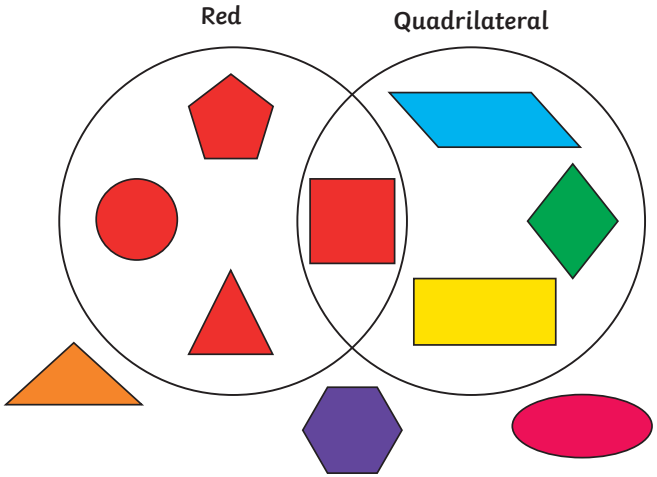
Venn Diagram

A Venn diagram is a diagram used to sort objects based on different criteria.

A Venn diagram is made up of two or more overlapping circles.

Objects placed in the section where the circles cross over meet both criteria.

Objects outside of the circles don't meet either set of criteria.



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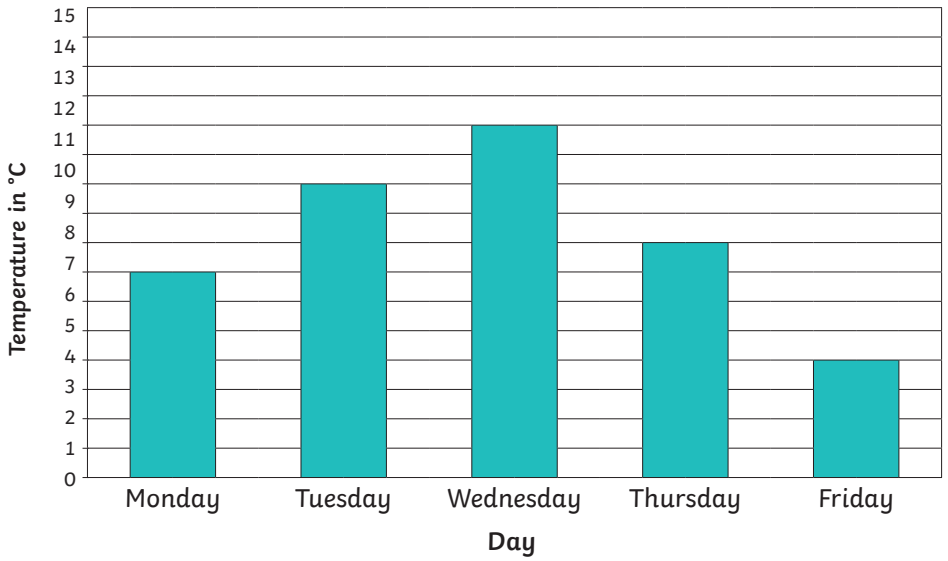
Year 4 Statistics

Time Graph

Time graphs show the changing of data over time.

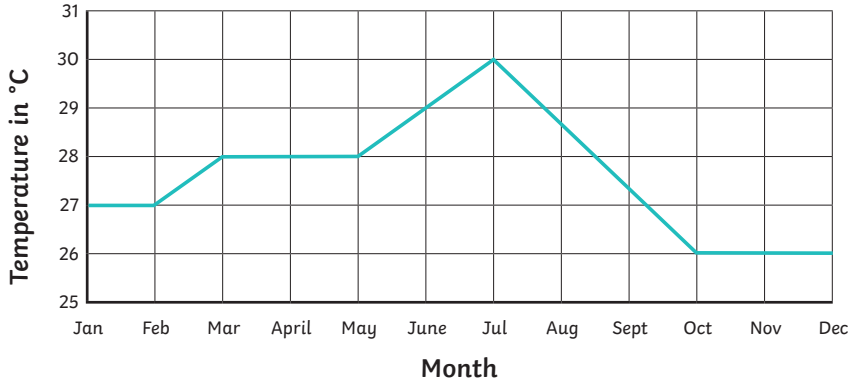
Here is a bar chart which shows the change in temperature over five days.

A Bar Chart to Show the Temperature at Lunchtimes



Here is a line graph which shows the change in temperature over twelve months.

A Line Graph to Show the Average Monthly Temperature in the Borneo Rainforest



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