



Students should develop their mathematical skills, and apply these well across the curriculum

Long Multiplication

Question: Work out 54×32

$$\begin{array}{r} \times 50 \quad 4 \\ 30 \quad \begin{array}{|l} 1500 \\ 120 \end{array} \\ 2 \quad \begin{array}{|l} 100 \\ 8 \end{array} \\ \hline 1620 \\ +108 \\ \hline 1728 \end{array}$$

Division

Question: Work out $2576 \div 7$

$$\begin{array}{r} 368 \quad \text{Answer} \\ 7 \overline{) 2576} \\ \underline{21} \\ 47 \\ \underline{42} \\ 56 \\ \underline{56} \\ 0 \end{array}$$

Calculating a Percentage

Question: Find 35% of 80

Without a calculator

10% of 80 = 8
10% of 80 = 8
10% of 80 = 8
5% of 80 = 4
28

With a calculator $80 \times 35 \div 100 = 28$

Working out the Angles for a Pie Chart

The angle of a pie adds up to 360°
There are 24 people altogether
 $360 \div 24 = 15$ so each person is 15° of the pie

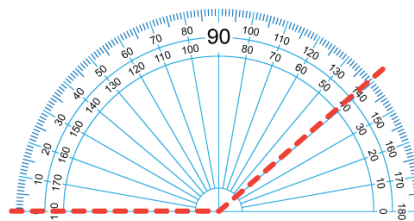
Colour	No. of People	Angle
Red	5	$5 \times 15 = 75^\circ$
Blue	3	$3 \times 15 = 45^\circ$
Silver	10	$10 \times 15 = 150^\circ$
Black	2	$2 \times 15 = 30^\circ$
Other	4	$4 \times 15 = 60^\circ$
	24	360



Measuring Accurately

Ignore the small gap at the start of the ruler! Start from the first mark.

This line measures **9.5cm** or **95mm**



Estimate the size of the angle first. This one is bigger than a right angle so it must be between 90° and 180°

Make sure the centre of the protractor is on the corner of the angle

This line goes through zero on the **outside scale**

Reading from the **outside scale** this angle measures 139°

Finding the Mean (Average)

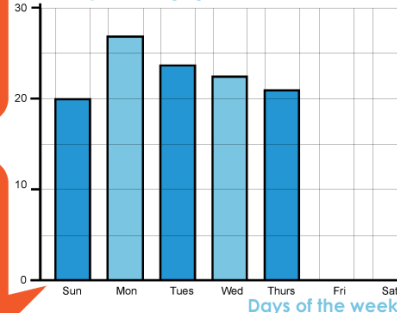
Question: Find the mean of these numbers 6, 10, 14, 7, 18, 5

First add up all the numbers: $6 + 10 + 14 + 7 + 18 + 5 = 60$

Divide by how many numbers there are: $60 \div 6 = 10$

The numbers up the side should be in line with the lines on the page

Bar Chart
Temperature ($^\circ\text{C}$)



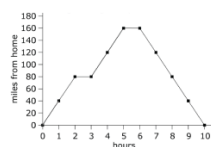
Always use a pencil and ruler to draw the bar chart



If these labels are words you should leave gaps between the bars

Each axis should be clearly labelled

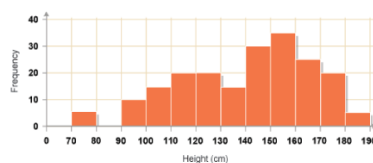
Line Graph



A Line Graph is often used when looking at something happening over a period of time

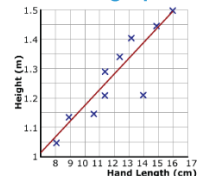
It is also often used in science to display the results of an experiment

Frequency Diagram



A Frequency Diagram looks similar to a Bar Chart except that the scale along the x axis is continuous and there are no gaps between the bars

Scattergraph



A Scattergraph can be used to see if there is any correlation (connection) between two sets of data

A line of best fit can be drawn to help make predictions

Metric Units

