

# Maths Knowledge Organiser

## Year 7 Analysing and Displaying data



### Median

Is the middle value of a set of data  
When that data is in order, smallest to biggest

### Mean

We add all the values and divide by how many values there are

Mean from a table

Score	Frequency
6	2
7	3
8	7
9	7
10	1

Multiply and add to find total  
Divide total by total frequency  
 $\frac{162}{20} = 8.1$

### Grouped frequency table

Stamp Price	Frequency
20-26	24
27-33	39
34-40	50
41-47	37

Calculate the same as above but use midpoints  
 $\frac{5200}{150} = 34.\dot{6}$

### Tally charts

Tally charts use groups of 5 to show how much is in each category.  
Total (Frequency) is how many tally there are.

Title: How Do We Get to School?		
Categories	Tallies	Total
Walk		7
Bike		3
Car		4
Bus		12

### Two way tables

A table which includes 2 sets of data  
Each row and column have a total  
Use subtraction to find missing values in the table

	Left-handed	Right-handed	Total
Boys	17	18	35
Girls	12	23	35
Total	29	41	70

### Mode

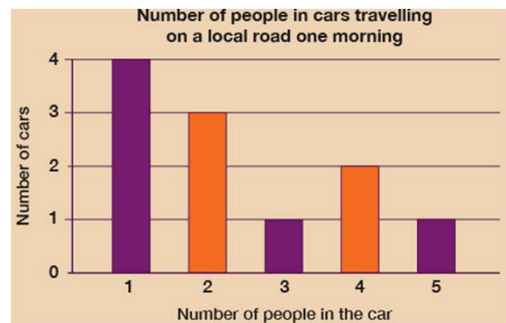
Is the most common value  
Date can have more than one mode  
Data can have no mode.  
Mode is also referred to as the modal value.

### Range

Is the spread of all of the data  
Calculated by subtracting the smallest value from the biggest

### Bar Charts

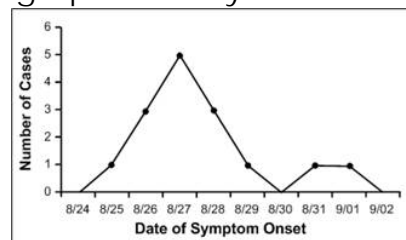
A bar chart have even scales, bars and gaps. The height of each bar is its total.



The modal value from a bar chart is the highest bar - the modal value is 1, 1 person per car.

### Frequency Polygons

A line graph where you use the midpoint



### Pie Charts

$\frac{360}{total}$  to find multiplier, then use protector

The table gives information about the holiday destination of 18 students in a class.

Country	Frequency	Angle
France	3 $\times 20$	$60^\circ$
Wales	4 $\times 20$	$80^\circ$
England	11 $\times 10$	$220^\circ$

Draw an accurate pie chart to show this information.

$360 - 18 = 20^\circ$   
per person.