

STATS

Summer Term

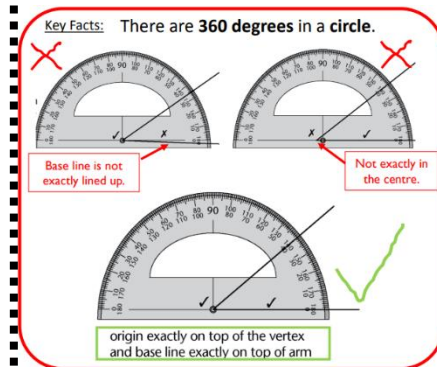
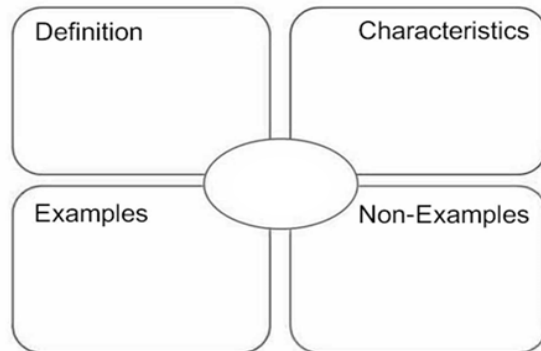
Statistics 1

Topics

- Mode, mean, range, median
- Pie charts

What do I need to be able to do?

- Be able to find the mode, range, median and mean for a set of data
- Represent data in a pie chart



Career Links

Being able to confidently work with data is a great skill to have and has lots of links with a number of careers such as:

- Statistician
- Business Analyst
- Biostatistician
- Healthcare

Average	Advantage	Disadvantage
Mode	Can be used for qualitative data Easy to obtain	There can be more than one mode or even no mode
Median	Not affected by very large or small values	Can be time consuming when there is a lot of data
Mean	Takes into account all of the data	Very small or very large values affects the mean

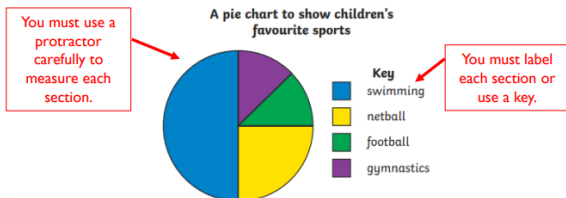
Pie charts

Pie charts represent **discrete data**. A circle is divided into segments, where each segment represents a data category. The size of each segment matches its proportion of the total amount.

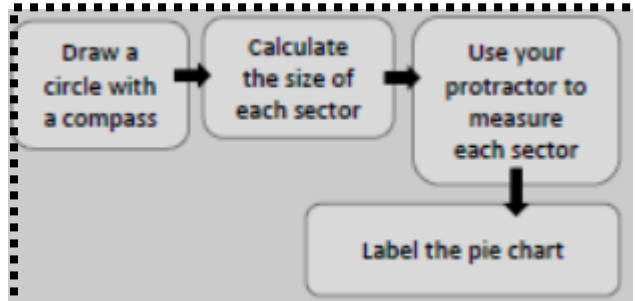
Sport	Frequency	Angle
Swimming	12	$12 \times 15 = 180^\circ$
Netball	6	$6 \times 15 = 90^\circ$
Football	3	$3 \times 15 = 45^\circ$
Gymnastics	3	$3 \times 15 = 45^\circ$

Total = 24

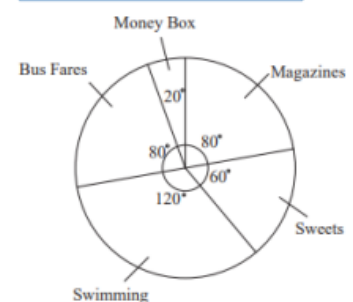
Each person: $360^\circ \div 24 = 15^\circ$



1. Find the total frequency.
2. Calculate one person by doing $360^\circ \div$ frequency.
3. Multiply each frequency by this value to get the angle size for each section.



Magazines	£4
Sweets	£3
Swimming	£6
Bus fares	£4
Money box	£1



Mean - Add up the values you are given and divide by the number of values you have.

Median - The median is the middle value, when your data is in order.

Mode - It is the value or item there is the most of.

Range - This is the difference between the largest and smallest values.

Topics

- Area and perimeter of basic shapes

What do I need to be able to do?

- Be able to find the perimeter of different shapes
- Be able to find the area of different shapes

SHAPE

Summer Term

Shape

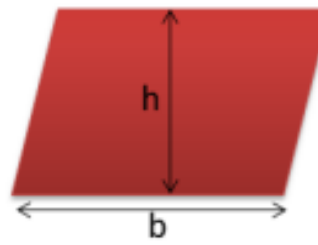
Key Vocabulary

Area	The size of a surface
Perimeter	The distance around the outside of a surface
Triangle	A 3 sided flat shape with straight sides
Square	A flat shape with 4 straight sides of equal length and interior angles of 90°
Parallelogram	A flat shape with 4 straight sides where the opposite sides are parallel
Trapezium	A flat 4 sided shape with one pair of parallel sides opposite each other
Dimensions	A measurable extent of a particular kind, such as length, breadth, depth, or height
Height	The measurement of something from base to top
Length	The measurement of something from end to end
Base	The lowest part or edge of something, the part on which it rests or is supported

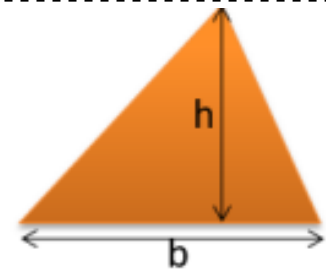
Career Links

Being able to confidently work with shapes is a great skill to have and has lots of links with a number of careers such as:

- Construction
- Game design
- Welder
- Architecture
- Engineering



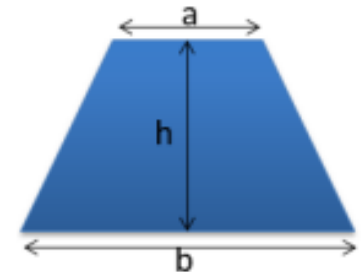
$$A = b \times h$$



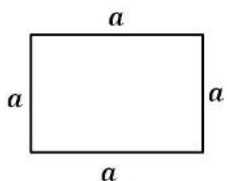
$$A = \frac{b \times h}{2}$$



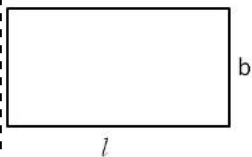
$$A = l \times w$$



$$A = \frac{(a + b) \times h}{2}$$



$$\begin{aligned} \text{Perimeter} &= a + a + a + a \\ &= 4a \end{aligned}$$



$$\begin{aligned} \text{Perimeter} &= l + b + l + b \\ &= 2l + 2b \\ &= 2(l + b) \end{aligned}$$

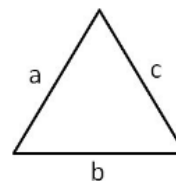
Definition

Characteristics

Word

Examples

Non-Examples



$$\text{Perimeter} = a + b + c$$

Year 8 –
Knowledge
Organiser

