

Geometry 3
Types of angles
Angles at a point, on a straight line, and opposite
Measuring angles
Properties of 3D shapes
Volume and capacity of 3D shapes
MINI REVIEW
Line symmetry
Rotational symmetry
OPEN BOOK ASSESSMENT
2D elevation of 3D shapes

DEFINITION

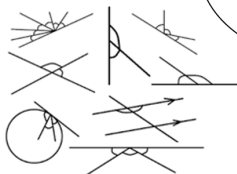
One or more angles connected at a point, where turning through each angle one after the other results in facing the opposite direction to the initial direction.

CHARACTERISTICS

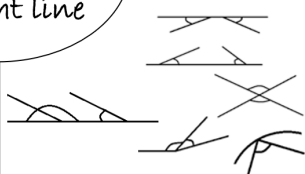
- Two or more lines connected to a single point.
- The angles make a semicircle around the point
- The total turn is 180°

Angles at a point on a straight line

EXAMPLES



NON-EXAMPLES



DEFINITION

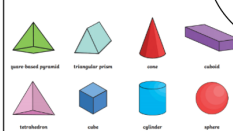
3D shapes are solid shapes or figures that have three dimensions (length, width and height)

CHARACTERISTICS

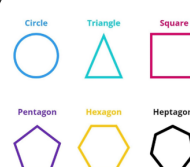
- 3D shapes have faces (sides), edges and vertices (corners).

3D shape

EXAMPLES



NON-EXAMPLES



Data Handling

Understand single averages and range

To draw and interpret pictograms

To draw and interpret bar charts

To draw and interpret line graphs

MINI REVIEW

To draw and interpret composite and dual bar charts

OPEN BOOK ASSESSMENT

DEFINITION

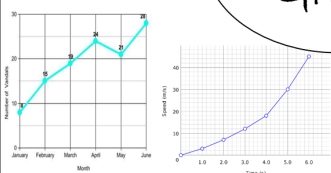
A graph that plots the change in a free variable against the change in a control variable.

CHARACTERISTICS

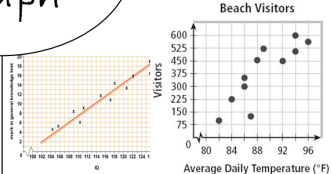
- Both axes are typically numerical.
- The control variable is plotted on the horizontal axis.
- The free variable is plotted on the vertical axis
- Neither axis has to start at 0

Line Graph

EXAMPLES



NON-EXAMPLES



DEFINITION

A chart that uses a number of icons to represent the frequency of qualitative data

CHARACTERISTICS

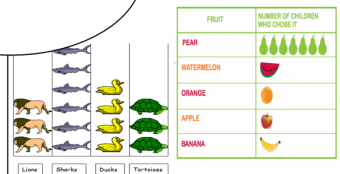
- Only one labelled axis, which shows the categories.
- The size of each icon should be roughly the same
- The icons should line up
- A key is required to show the frequency
- The same symbol needs to be used for all categories

Pictogram

EXAMPLES



NON-EXAMPLES



Ratio and Proportion

Understand ratio notation including fractions

To simplify ratio and use 1:n or n:1

To share amounts using ratio

Use direct proportion to find a new amount/or cost

MINI REVIEW

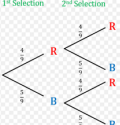
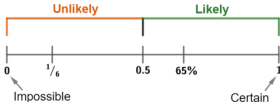
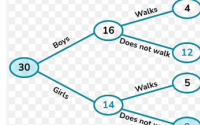
Using a ratio find a missing value given one amount

Use direct proportion with receipes, maps and scales

OPEN BOOK ASSESSMENT

DEFINITION		CHARACTERISTICS																							
Two quantities are said to be in proportion if there is a constant multiplicative relationship between the two quantities.	Proportion - Two measures or quantities - A constant multiplicative relationship between them (often called the 'exchange rate' or 'conversion factor') - Maintains a constant ratio when scaled	Ratio - Write using a ":" symbol, say "to" - Equivalent to a fraction. - Unchanged when both quantities are multiplied by same factor.	Ratio - Write using a ":" symbol, say "to" - Equivalent to a fraction. - Unchanged when both quantities are multiplied by same factor.																						
EXAMPLES		NON-EXAMPLES																							
<table border="1"> <tr> <th>Hours</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> <tr> <th>Miles</th> <td>1.5</td> <td>3</td> <td>4.5</td> <td>6</td> <td>7.5</td> </tr> </table> £1 = \$1.50 75 heartbeats per minute. 1m = 100cm	Hours	1	2	3	4	5	Miles	1.5	3	4.5	6	7.5	<table border="1"> <tr> <th>Number of Apples</th> <th>Total Cost</th> </tr> <tr> <td>10</td> <td>\$2.50</td> </tr> <tr> <td>20</td> <td>\$5.00</td> </tr> <tr> <td>30</td> <td>\$7.50</td> </tr> <tr> <td>40</td> <td>\$9.50</td> </tr> </table> $F = \frac{9}{5}C + 32$	Number of Apples	Total Cost	10	\$2.50	20	\$5.00	30	\$7.50	40	\$9.50	Ratio 2:3 7:9 5:4:12 2 parts sugar to 3 parts flour Twice as many girls as boys 1:1.345 4.2103:1 £1 = \$1.20 35p per 100g 43 miles per gallon	Ratio One teabag per person and one extra "for the pot". There are six more girls than boys in the class. £6 per day + £2 service charge
Hours	1	2	3	4	5																				
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Probability
Understand probability scales and the link between words and numerical values
Calculate simple probabilities
Understand probabilities add up to one
Draw and interpret a sample space diagram
MINI REVIEW
Problem solving using probability and other areas of maths
Draw and interpret tree diagrams
OPEN BOOK ASSESSMENT

DEFINITION A tree diagram is a visual tool used to map out all possible outcomes of a sequence of events.	CHARACTERISTICS It consists of "branches" (which represent events or choices) and "nodes" (which represent the points where events occur). They are primarily used in probability, combinatorics, and statistics.	DEFINITION The measure of the likelihood of an event occurring or not occurring.	CHARACTERISTICS Written as a decimal or (more commonly) a fraction. The value must be between 0 and 1 (inclusive)
EXAMPLES 	Tree Diagrams	EXAMPLES $P(\text{win}) = 0.34$ $P(\text{not rain}) = \frac{5}{7}$ 	NON-EXAMPLES $P(\text{win}) = 3$ $P(\text{red}) = -0.6$ Unlikely means $\frac{1}{4}$ Likely means $\frac{3}{4}$ 50:50
	NON-EXAMPLES 	Probability	