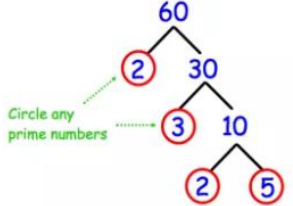
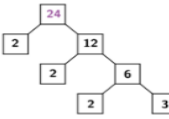
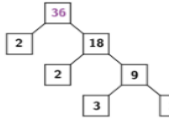
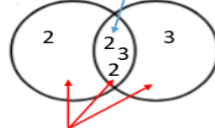






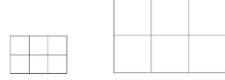
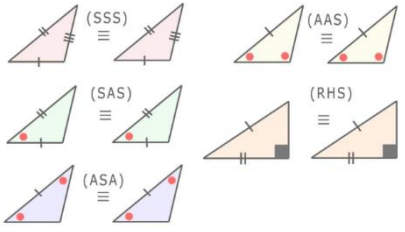












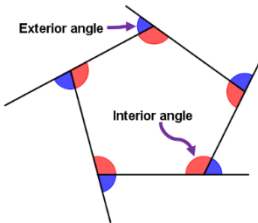
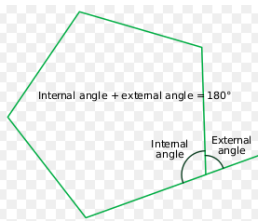
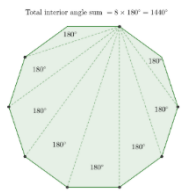
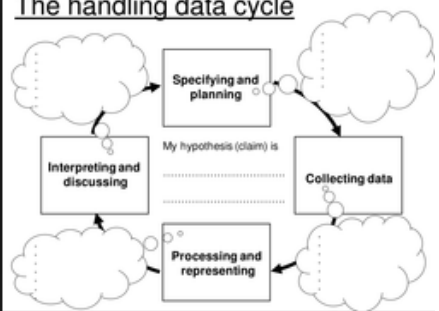
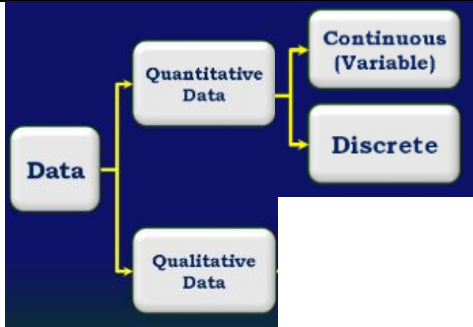


Maths Subject/Topic: Number	Subject/Topic: Number	Subject/Topic: 2D Shapes																																																							
<p>Key ideas: Reciprocal, Fractions. Decimals and Rounding</p>	<p>Key ideas: Product of Primes HCF LCM</p>	<p>Key ideas: Symmetry, Similarity and Congruence</p>																																																							
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So there are $2 \times 3 = 6$ thirds in 2. We also have an extra 2 thirds, so add this on. In total, $2 \times 3 + 2$ thirds 8 thirds altogether</p> </td> <td style="padding: 5px;"> $3\frac{5}{6} = \frac{23}{6}$ <p style="font-size: x-small;">There are 6 sixths in 1. So there are $3 \times 6 = 18$ sixths in 3. We also have an extra 5 sixths, so add this on. In total, $3 \times 6 + 5$ sixths 23 sixths altogether</p> </td> </tr> </table> </div> <div data-bbox="560 502 907 718" style="border: 1px dashed blue; padding: 5px;"> <p style="text-align: center; color: blue; font-weight: bold;">Multiplying Decimals</p> <p style="text-align: center; color: blue; font-weight: bold;">Multiply 0.4 x 0.14</p> <p style="font-size: x-small;">Step 1: Write the problem vertically</p> $\begin{array}{r} 0.14 \\ \times 0.4 \\ \hline 0.056 \end{array}$ <p style="font-size: x-small;">Step 2: Ignore the decimal points and multiply</p> <p style="font-size: x-small;">Step 3: Determine where the decimal point goes in the product.</p> <p style="text-align: center; border: 1px solid blue; border-radius: 50%; padding: 2px; display: inline-block;">0.056</p> <p style="text-align: center; color: blue; font-weight: bold;">The decimal moves 3 places to the left.</p> </div> <p data-bbox="235 821 481 845" style="font-weight: bold;">Rules for Counting Sig Figs</p> <ul style="list-style-type: none"> • Nonzero integers always count as significant figures – 3456 has 4 sig figs. • Leading zeros are never significant – 0.000757 has 3 sig figs • Captive zeros always count as significant figures – 16.07 has 4 sig figs • Trailing zeros are significant only if the number contains a decimal point. – 9.300 has 4 sig figs <p data-bbox="560 782 705 805" style="font-weight: bold;">Rounding Rules</p> <p style="color: green; font-weight: bold;">0-4: round down</p> <p style="color: orange; font-weight: bold;">5-9: round up</p> <table border="0" data-bbox="560 893 828 1077" style="width: 100%;"> <tr> <td>0.00533 (2 sig figs)</td> <td>0.0053</td> </tr> <tr> <td>426.3 (3 sig figs)</td> <td>426</td> </tr> <tr> <td>1890 (1 sig fig)</td> <td>2000</td> </tr> <tr> <td>0.0296 (2 sig figs)</td> <td>0.030</td> </tr> </table>	Fraction	Reciprocal	$\frac{1}{2}$	$\frac{2}{1}$	$\frac{5}{6}$	$\frac{6}{5}$	$-\frac{17}{3}$	$-\frac{3}{17}$	Number	Reciprocal as Fraction	3	1/3	8	1/8	50	1/50	1000	1/1000	5897	1/5897	$2\frac{2}{3} = \frac{8}{3}$ <p style="font-size: x-small;">There are 3 thirds in 1. 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In total, $3 \times 6 + 5$ sixths 23 sixths altogether</p>	0.00533 (2 sig figs)	0.0053	426.3 (3 sig figs)	426	1890 (1 sig fig)	2000	0.0296 (2 sig figs)	0.030	<p style="text-align: center; color: blue; font-weight: bold;">Product of Primes</p> <p style="text-align: center; color: red; font-weight: bold;">Write 60 as a product of primes</p> <div style="text-align: center;">  </div> <p style="text-align: center; color: blue; font-weight: bold;">60 = 2 × 2 × 3 × 5</p> <p style="text-align: center; color: blue; font-weight: bold;">60 = 2² × 3 × 5</p> <p style="text-align: center; color: green; font-size: x-small;">In index form</p> <p style="text-align: center; color: red; font-weight: bold;">You will need to know the primes</p> <p style="text-align: center; color: green; font-weight: bold;">2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31 ...</p> <hr/> <p style="text-align: center; color: red; font-weight: bold;">HCF and LCM</p> <p style="text-align: center;">Find the HCF and LCM of 24 and 36</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <div style="text-align: center; margin: 10px 0;">  <p style="border: 1px solid blue; padding: 2px; display: inline-block; color: blue; font-weight: bold;">HCF: 2 × 2 × 3 = 12</p> </div> <div style="text-align: center; margin: 10px 0;"> <p style="border: 1px solid red; padding: 2px; display: inline-block; color: red; font-weight: bold;">LCM: 2 × 2 × 2 × 3 × 3 = 72</p> </div>	<table border="1" data-bbox="1617 279 2128 582" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>Name</th> <th>Line Symmetry Diagram</th> <th>Line Symmetry Count</th> <th>Rotation Symmetry Diagram</th> <th>Rotation Symmetry Order</th> </tr> </thead> <tbody> <tr> <td>Parallelogram</td> <td style="text-align: center;">None</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">2</td> </tr> <tr> <td>Rectangle</td> <td></td> <td style="text-align: center;">2</td> <td></td> <td style="text-align: center;">2</td> </tr> <tr> <td>Trapezoid</td> <td></td> <td style="text-align: center;">0/1</td> <td style="text-align: center;">None</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Regular Polygon</td> <td></td> <td style="text-align: center;">Equal to the number of sides of the regular polygon</td> <td></td> <td style="text-align: center;">Equal to the number of sides of the regular polygon</td> </tr> </tbody> </table> <p style="text-align: center; color: blue; font-weight: bold;">What are similar shapes?</p> <p style="font-size: x-small;">Shapes and solids may be enlarged or reduced in size. When this is done with all measurements kept in proportion, the resulting shape or solid is said to be mathematically similar to the original.</p> <div style="text-align: center; margin: 10px 0;">  </div> <div style="text-align: center; margin: 10px 0;">  </div> <p style="text-align: center; font-weight: bold;">Congruent Triangles Above</p>	Name	Line Symmetry Diagram	Line Symmetry Count	Rotation Symmetry Diagram	Rotation Symmetry Order	Parallelogram	None	0		2	Rectangle		2		2	Trapezoid		0/1	None	0	Regular Polygon		Equal to the number of sides of the regular polygon		Equal to the number of sides of the regular polygon
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<p>Reciprocal: Two numbers whose product is 1</p> <p>Significant Figure Rounding: Start counting from the first non-zero digit.</p> <p>Mixed Number: Contains a whole number and a fraction.</p> <p>Improper Fraction: Has a value greater than one with the numerator being bigger than the denominator.</p>	<p>HCF: Highest Common Factor</p> <p>LCM: Lowest Common Multiple</p> <p>Product: Numbers multiplied together</p> <p>Prime Number: Number with exactly two factors, itself and 1</p>	<p>Congruent: Identical shapes</p> <p>SSS – Side Side Side</p> <p>ASA- Angle Side Angle</p> <p>RHS – Right angle, Hypotenuse and Side etc.</p> <p>Similar: Shapes where each side has been enlarged by the same scale factor.</p>																																																							

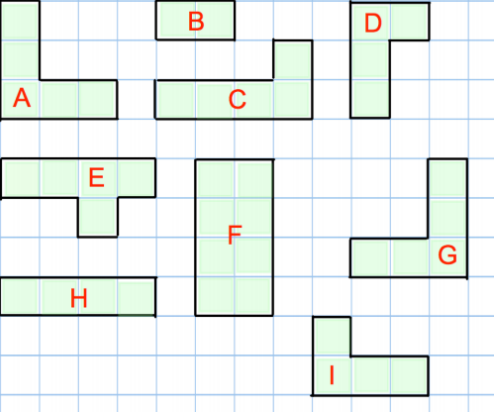
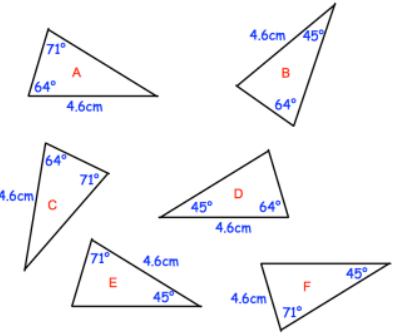
Maths Subject/Topic: Angles	Subject/Topic: Data
Key ideas: Interior and Exterior. Key Rules	Key ideas: Sampling Methods, Types of Data, Data Handling Cycle, 2 Way Tables
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  <p>Exterior angle</p> <p>Interior angle</p> </div> <div style="width: 50%;"> <p><u>Exterior angles of any polygon sum to 360°</u></p> <p><u>Interior angles are on the inside.</u></p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="width: 45%;">  <p>Internal angle + external angle = 180°</p> </div> <div style="width: 45%;">  <p>Total interior angle sum = $5 \times 108^{\circ} = 540^{\circ}$</p> </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><u>The handling data cycle</u></p>  </div> <div style="width: 45%;">  </div> </div> <p>➤ The most basic sampling method: Simple Random Sampling</p> <p>When performing simple random sampling, every member of the population (N) has an equal chance of being selected for your sample (n).</p> <p>-Arguably the best sampling method, as your sample is almost guaranteed to be representative of your population.</p> <p>-Hardly ever used due to being too impractical.</p> <p>Sampling with Replacement</p> <ul style="list-style-type: none"> When a number is selected for a sample, it is not removed from the population. <p>Stratified Sampling</p> <ul style="list-style-type: none"> Population is divided into groups. Random samples are drawn from each group. <p>Systematic Sampling</p> <ul style="list-style-type: none"> Population is arranged in sequential order. Select a random starting point. Select every k^{th} item. <p>Cluster Sampling</p> <ul style="list-style-type: none"> Population is divided into sections. Some sections are randomly selected. Every item in selected sections is included in sample. 1.
Keywords /Key Language: Interior, Exterior, sum.	Keywords /Key Language: Raw Data, Primary Data, Secondary Data, Qualitative, Quantitative, Discrete, Continuous.
<p>Exterior Angle: The outside angle when the side of the polygon is extended.</p> <p>Interior angle: The inside angle.</p> <p>Interior and Exterior angles are on a straight line.</p>	<p>Data Handling Cycle: The process you go through to carry out statistical analysis.</p> <p>Types of Data – Qualitative is data that gives you a worded solution</p> <p>Quantitative is data that is numerical</p> <p>Discrete data is data that is counted; it does not take all values in a given range.</p> <p>Continuous data is data that is measured; It can take any value within a given range.</p> <p>Two way tables: Where each value gives you two pieces of information</p>

What is your favorite sport to watch on television?

	Football	Basketball	Baseball
Males	40	22	15
Females	12	16	45
Total	52	38	60

Gender compared to handedness

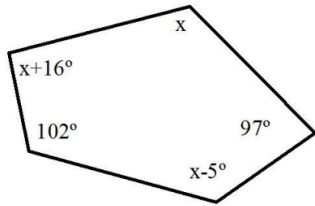
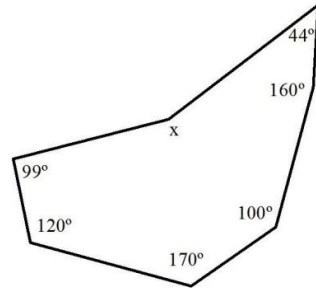
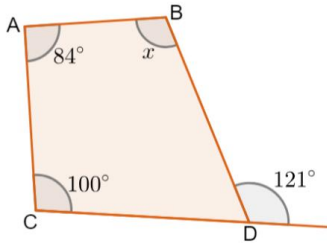
	Handed		
	Left	Right	
Female	7	46	53
Male	5	63	68
	12	109	121

Maths Subject/Topic: Number	Subject/Topic: Number	Subject/Topic: 2D Shapes																
Key ideas: Reciprocal, Fractions. Decimals and Rounding	Key ideas: Product of Primes HCF LCM	Key ideas: Symmetry, Similarity and Congruence																
<p>1. Fill in the blanks</p> $\frac{1}{9} \times \square = 1$ <p>2. Write down the reciprocal of 5</p> <p>3. Write down the reciprocal of 0.4(1)</p>	<p>Express 100 as a product of its prime factors. Write 42 as a product of its prime factors.</p>	 <p>Find a shape that is congruent to A. Find another pair of congruent shapes. Find a shape that is mathematically similar to B.</p>																
<p>Matthew weighed 81kg before training for a marathon</p> <p>His weight decreased by a $\frac{1}{9}$.</p> <p>Work out his weight after the marathon.</p>	<p>A number is written as a product of its prime factors as $2 \times 3^2 \times 5$</p> <p>Work out the number.</p>	<p>Triangles A and B are Similar. Tick correct box</p> <table border="0"> <tr> <td></td> <td style="text-align: center;">True</td> <td style="text-align: center;">False</td> <td style="text-align: center;">Maybe</td> </tr> <tr> <td>If Triangle A is isosceles, Triangle B has to be isosceles.</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Triangles A and B have different size angles</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Triangle A has a larger area than Triangle B</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>		True	False	Maybe	If Triangle A is isosceles, Triangle B has to be isosceles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Triangles A and B have different size angles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Triangle A has a larger area than Triangle B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<p>Round 5607012 to three significant figures</p> <p>.....(1)</p> <p>Write the number four and two-thirds in figures as a mixed number.</p> <p>Round 0.123456 to four significant figures</p> <p>.....(1)</p> <p>Write the number 2.5 as a mixed number.</p> <p>Round 0.961 to one significant figure</p> <p>.....(1)</p> <p>Write the number 3.75 as a mixed number.</p> <p>Round 1782739 to four significant figures</p> <p>.....(1)</p>	<p>Find the Lowest Common Multiple (LCM) of 60 and 75.</p> <p>Find the Highest Common Factor (HCF) of 48 and 56.</p>	 <p>Which two triangles are congruent to triangle A? and</p>																

Maths Subject/Topic: Angles

Key ideas: Interior and Exterior.

Calculate the value of the missing interior angle labelled x.



Subject/Topic: Data

Key ideas: Sampling Methods, Types of Data, Data Handling Cycle, 2 Way Tables

A call centre has 800 workers.
The building has 20 floors.
Each floor has 40 workers.

Describe a method that could be used to obtain a random sample of 120 workers from the call centre.

.....

 (1)

2) Saru wishes to learn about people's spending habits on food. He stands at the end of his road and asks 100 people the following question.



Write down two criticisms of his questions and explain why his survey might be biased.

1) Find the interior angle sum of the polygon shown below

[1]



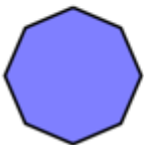
1. Height in cm
2. Nationality
3. Number of CDs sold by an artist
4. How many people live in your household
5. Time taken to run 100m
6. Favourite colour
7. Distance from home to school
8. Number of chocolates in a box
9. How much you agree with a statement (1 = agree, 2 = neutral, 3 = disagree)

10. Daily temperature
11. Capacity of a water tank
12. Number of pages in a book
13. The length of your foot
14. Shoe size
15. Postcode

What type of data are each of these data sets? Qualitative, Quantitative Discrete or Quantitative Continuous?

2) Find one interior angle of a regular polygon with 7 sides, giving your answer to 3 significant figures where necessary [1]

3) Find the exterior angle sum of the polygon shown below [1]



	Still	Sparkling	Both	Total
Male	45			72
Female		35	17	
Total			25	143

a) Complete the two-way table.

