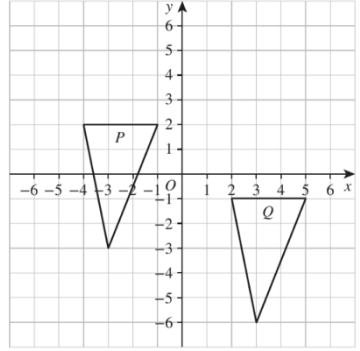
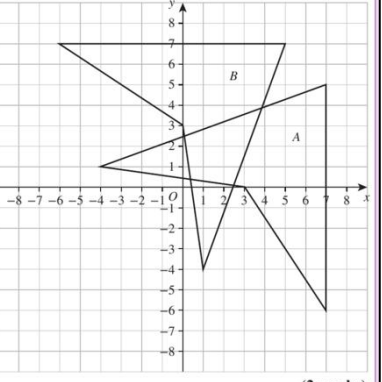
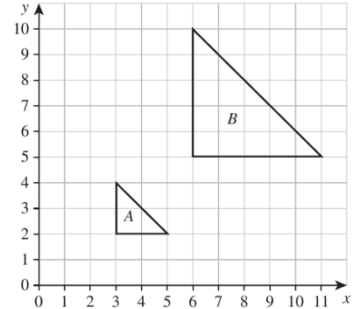
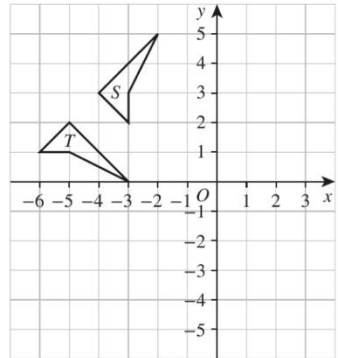
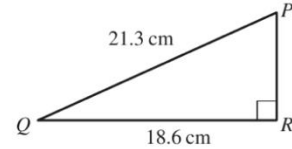
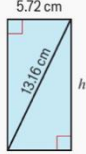
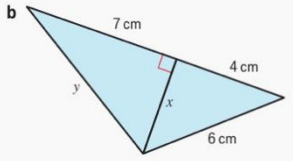
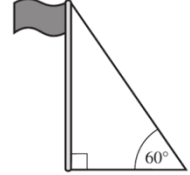
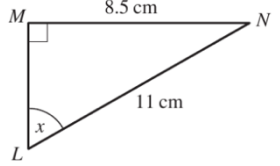


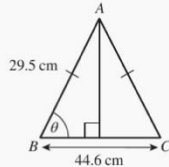
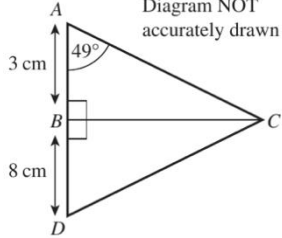
| Learning Intention                                                          | Vocab                                                                                                                                                   | Concept                        | Retrieval                                                                                                                                                                                             | Success Criteria                                                                                                                                                            | Red Zone                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Lesson 1 Week 1</p> <p>Can I translate shapes on a co-ordinate grid?</p> | <p>Translation</p> <p>Column</p> <p>Vector</p> <p>Up/down</p> <p>Left/Right</p> <p>Vertex</p> <p>Congruent</p> <p>Image</p> <p>Object</p>               | <p>GEOMETRY &amp; MEASURES</p> | <p>Use a column vector.</p> <p>Translate shapes using directions in words.</p>                                                                                                                        | <p>I will be able to:</p> <ul style="list-style-type: none"> <li>Translate a shape on a coordinate grid.</li> <li>Use a column vector to describe a translation.</li> </ul> | <p><b>Exam-style question</b></p> <p><b>10</b> Describe fully the single transformation that maps triangle <i>P</i> to triangle <i>Q</i>. (2 marks)</p>  |
| <p>Lesson 2 Week 1</p> <p>Can I reflect shapes on a co-ordinate grid?</p>   | <p>Reflection</p> <p>Mirror line</p> <p>Vertical</p> <p>Horizontal</p> <p>Diagonal</p> <p>Perpendicular</p> <p>Congruent</p> <p>Image</p> <p>Object</p> | <p>GEOMETRY &amp; MEASURES</p> | <p>Reflections on a squared grid.</p> <p>Identify parallel &amp; perpendicular lines.</p> <p>Name common equations of straight lines eg <math>x=4</math>, <math>y=7</math> &amp; <math>y=x</math></p> | <p>I will be able to:</p> <ul style="list-style-type: none"> <li>Draw reflections on a coordinate grid.</li> <li>Describe reflections on a coordinate grid.</li> </ul>      | <p><b>Exam-style question</b></p> <p><b>14</b> Describe fully the single transformation that maps shape <i>A</i> to shape <i>B</i>. (2 marks)</p>       |

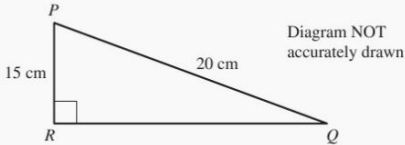
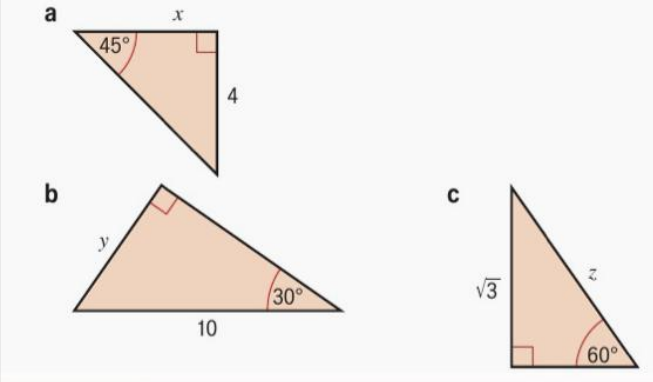
| Learning Intention                                             | Vocab                                                                                               | Concept             | Retrieval                                                                                                                     | Success Criteria                                                                                                                                                    | Red Zone                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lesson 1 Week 2<br>Can I rotate shapes on a co-ordinate grid?  | Rotation<br>Clockwise<br>Anticlockwise<br>Angle<br>Centre<br>Vertex<br>Congruent<br>Image<br>Object | GEOMETRY & MEASURES | Know the number of degrees in fractions of a turn.<br>Use the words clockwise and anticlockwise.<br>Rotate on a squared grid. | I will be able to: <ul style="list-style-type: none"> <li>Rotate a shape around a centre point on a coordinate grid.</li> <li>Fully describe a rotation.</li> </ul> | <div> <b>Exam-style question</b><br/>           9 Describe fully the single transformation that maps triangle A to triangle B.<br/> <br/>           (3 marks)         </div>                                                                                                                                                                             |
| Lesson 2 Week 2<br>Can I enlarge shapes on a co-ordinate grid? | Enlargement<br>Scale Factor<br>Centre<br>Vertex<br>Similar<br>Image<br>Object                       | GEOMETRY & MEASURES | Find scale factor from object to image and from image to object.                                                              | I will be able to: <ul style="list-style-type: none"> <li>Enlarge a shape by a scale factor.</li> <li>Enlarge a shape using a centre of enlargement.</li> </ul>     | <div> <b>Exam-style question</b><br/>           9<br/> <br/>           Enlarge this rectangle by<br/>           a scale factor <math>1\frac{1}{2}</math>, using centre of enlargement <math>(-5, -4)</math> (2 marks)<br/>           b scale factor <math>\frac{1}{4}</math>, using centre of enlargement <math>(-1, -6)</math> (2 marks)         </div> |

| Learning Intention                                                                 | Vocab                                                                         | Concept             | Retrieval                                                                                                                                                    | Success Criteria                                                                                                                                                                                                                                                                                   | Red Zone                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lesson 3 Week 2<br>Can I describe an enlargement of a shape on a co-ordinate grid? | Enlargement<br>Scale Factor<br>Centre<br>Vertex<br>Similar<br>Image<br>Object | GEOMETRY & MEASURES | Enlarge a shape on a co-ordinate grid.<br><br>Find scale factor between two dimensions.                                                                      | I will be able to: <ul style="list-style-type: none"> <li>Identify the scale factor of an enlargement.</li> <li>Find the centre of enlargement.</li> <li>Describe an enlargement.</li> </ul>                                                                                                       | <div> <b>Exam-style question</b><br/> <b>10</b> Describe fully the single transformation that maps shape A to shape B.           </div>  <div>(3 marks)</div>                                                                                                                                                                |
| Lesson 1 Week 3<br>Can I combine transformations of a shape on a co-ordinate grid? | Rotation<br>Enlargement<br>Translation<br>Reflection                          | GEOMETRY & MEASURES | State key information for describing transformations.<br>Identify the type of transformation used.<br>Understand that parallel lines have the same gradient. | I will be able to: <ul style="list-style-type: none"> <li>Transform shapes using more than one transformation.</li> <li>Describe combined transformations of shapes on a grid.</li> <li>Find the equations of straight-line graphs.</li> <li>Sketch graphs given the values of m and c.</li> </ul> | <div> <b>Exam-style question</b><br/> <b>12</b> Shape S can be transformed to shape T by a rotation <math>90^\circ</math> clockwise about <math>(-3, -1)</math> followed by a translation <math>\begin{pmatrix} a \\ b \end{pmatrix}</math>. Find the value of a and the value of b.           </div>  <div>(3 marks)</div> |
| Lesson 2 Week 3                                                                    | UNIT TEST / Review                                                            |                     |                                                                                                                                                              |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                 |

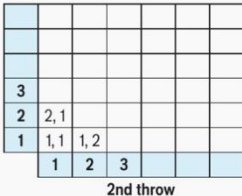
| Learning Intention                                                                    | Vocab                                                                      | Concept             | Retrieval                                                                                                                  | Success Criteria                                                                                                                                                                            | Red Zone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lesson 2 Week 3<br>Can I use Pythagoras' theorem in a right-angled triangle?          | Pythagoras<br>Hypotenuse<br>Right-angled triangle<br>Square<br>Square root | GEOMETRY & MEASURES | Squares and square roots.<br>Substitute into and evaluate expressions.<br>Round answers to a specified degree of accuracy. | I will be able to: <ul style="list-style-type: none"> <li>Calculate the length of the hypotenuse in a right-angled triangle.</li> <li>Solve problems using Pythagoras' theorem.</li> </ul>  | <div> <div> <b>Exam-style question</b> <p>11 A boat's sail is a right-angled triangle. The height of the sail is 7.6 m. The base of the sail is 2.8 m. Work out the length of the longest edge of the sail. Give your answer correct to 2 decimal places. (3 marks)</p> </div> <div> <b>Exam tip</b> <p>Sketch the right-angled triangle. Label the information you know. Label the length you want to find <math>x</math>.</p> </div> </div>                                                                                                                                   |
| Lesson 3 Week 3<br>Can I use and apply Pythagoras' theorem in right-angled triangles? | Pythagoras<br>Hypotenuse<br>Right-angled triangle<br>Square<br>Square root | GEOMETRY & MEASURES | Interpret a surd expression shown on the calculator display. Identify the hypotenuse, and calculate its length.            | I will be able to: <ul style="list-style-type: none"> <li>Calculate the length of a shorter side in a right-angled triangle.</li> <li>Calculate the length of a line segment AB.</li> </ul> | <div> <b>Exam-style question</b> <p>8 Work out the perimeter of triangle <math>PQR</math>.</p>  <p>Diagram NOT accurately drawn</p> <p>(3 marks)</p> </div> <div> <b>Problem-solving / Reasoning</b> Find the lengths of the unknown sides in these diagrams. <div> <p>a</p>  </div> <div> <p>b</p>  </div> </div> |

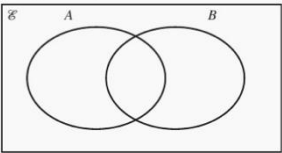
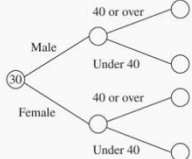
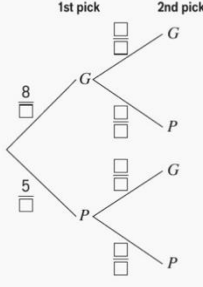
| Learning Intention                                                                      | Vocab                                                                           | Concept             | Retrieval                                                                                           | Success Criteria                                                                                                                                                                                     | Red Zone                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lesson 4 Week 3<br>Can I use the sine ratio in right-angled triangles?                  | Sine<br>Opposite<br>Hypotenuse<br>Adjacent<br>Angle<br>Right-angle              | GEOMETRY & MEASURES | Simplify fractions.<br><br>Convert fractions to decimals.                                           | I will be able to: <ul style="list-style-type: none"> <li>Use the sine ratio to calculate the length of a side in a right-angled triangle.</li> <li>Use the sine ratio to solve problems.</li> </ul> | <div> <p><b>Exam-style question</b></p> <p><b>13</b> A vertical flagpole is 7.5 m tall. The top of the flagpole is to be secured to the ground by a rope. The rope will make an angle of <math>60^\circ</math> with the horizontal ground. Will a rope of length 8 m reach the top of the flagpole? <b>(4 marks)</b></p>  </div> |
| Lesson 1 Week 4<br>Can I use the sine ratio in right-angled triangles to find an angle? | Cosine<br>Opposite<br>Hypotenuse<br>Adjacent<br>Inverse<br>Angle<br>Right-angle | GEOMETRY & MEASURES | Calculate the sine of an angle in a right-angled triangle.<br><br>Use the sine key on a calculator. | I will be able to: <ul style="list-style-type: none"> <li>Use the sine ratio to calculate an angle in a right-angled triangle.</li> <li>Use the sine ratio to solve problems.</li> </ul>             | <div> <p><b>Exam-style question</b></p> <p><b>10</b> <math>LMN</math> is a right-angled triangle.<br/> <math>MN = 8.5</math> cm<br/> <math>LN = 11</math> cm<br/> Calculate the size of the angle marked <math>x</math>.<br/> Give your answer correct to 1 decimal place. <b>(2 marks)</b></p>  </div>                         |

| Learning Intention                                                                                            | Vocab                                                                                                           | Concept                        | Retrieval                                                                                                                      | Success Criteria                                                                                                                                                                                                                                                                       | Red Zone                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Lesson 2 Week 4</p> <p>Can I use the cosine ratio in right-angled triangles to find angles and sides?</p>  | <p>Cosine</p> <p>Opposite</p> <p>Hypotenuse</p> <p>Adjacent</p> <p>Inverse</p> <p>Angle</p> <p>Right-angle</p>  | <p>GEOMETRY &amp; MEASURES</p> | <p>Practise use of the sine ratio. Identify the hypotenuse and adjacent side in a right-angled triangle.</p>                   | <p>I will be able to:</p> <ul style="list-style-type: none"> <li>Use the cosine ratio to calculate a length in a right-angled triangle.</li> <li>Use the cosine ratio to calculate an angle in a right-angled triangle.</li> <li>Use the cosine ratio to solve problems.</li> </ul>    | <p><b>Exam-style question</b></p> <p>14</p>  <p><math>ABC</math> is an isosceles triangle.<br/> <math>AB = 29.5</math> cm<br/> <math>BC = 44.6</math> cm<br/>         Work out the size of angle <math>\theta</math>.<br/>         Give your answer correct to 1 decimal place. (3 marks)</p>                                    |
| <p>Lesson 3 Week 4</p> <p>Can I use the tangent ratio in right-angled triangles to find angles and sides?</p> | <p>Tangent</p> <p>Opposite</p> <p>Hypotenuse</p> <p>Adjacent</p> <p>Inverse</p> <p>Angle</p> <p>Right-angle</p> | <p>GEOMETRY &amp; MEASURES</p> | <p>Identify the opposite and adjacent sides in right-angled triangles.</p> <p>Practise use of the cosine &amp; sine ratio.</p> | <p>I will be able to:</p> <ul style="list-style-type: none"> <li>Use the tangent ratio to calculate a length in a right-angled triangle.</li> <li>Use the tangent ratio to calculate an angle in a right-angled triangle.</li> <li>Use the tangent ratio to solve problems.</li> </ul> | <p><b>Exam-style question</b></p> <p>16</p>  <p>Diagram NOT accurately drawn</p> <p><math>ABC</math> and <math>BCD</math> are right-angled triangles.<br/> <math>AB = 3</math> cm <math>BD = 8</math> cm angle <math>BAC = 49^\circ</math><br/>         Work out the size of angle <math>BCD</math>.<br/>         (6 marks)</p> |

| Learning Intention                                                                                           | Vocab                                                                                              | Concept             | Retrieval                                     | Success Criteria                                                                                                                                                                                                                                                               | Red Zone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lesson 1 Week 5<br>Can I use all three ratios to solve problems in right-angled triangles?                   | Cosine<br>Sine<br>Tangent<br>Opposite<br>Hypotenuse<br>Adjacent<br>Inverse<br>Angle<br>Right-angle | GEOMETRY & MEASURES | Identify the sine, cosine and tangent ratios. | I will be able to: <ul style="list-style-type: none"> <li>Understand and recall trigonometric ratios in right-angled triangles.</li> <li>Use trigonometric ratios to solve problems.</li> <li>Know the exact values of the sine, cosine and tangent of some angles.</li> </ul> | <div> <b>Exam-style question</b><br/>           7 <math>PQR</math> is a right-angled triangle.<br/> <br/>           a Work out the size of angle <math>RPQ</math>.<br/>           Give your answer correct to 1 decimal place. (2 marks)<br/>           b The length of <math>PQ</math> is reduced by 4 cm.<br/>           The length of <math>PR</math> is reduced by 3 cm.<br/>           Angle <math>PRQ</math> is still <math>90^\circ</math>.<br/>           Will the value of <math>\cos RPQ</math> increase, decrease or stay the same?<br/>           You must give a reason for your answer. (1 mark)         </div> |
| Lesson 2 Week 5<br>Can I use all three ratios with exact values to solve problems in right-angled triangles? | Cosine<br>Sine<br>Tangent<br>Opposite<br>Hypotenuse<br>Adjacent<br>Inverse<br>Angle<br>Right-angle | GEOMETRY & MEASURES | Practise using all three ratios.              | I will be able to: <ul style="list-style-type: none"> <li>Know the exact values of the sine, cosine and tangent of some angles.</li> <li>Use trigonometric ratios to solve problems without a calculator.</li> </ul>                                                           | Work out the missing lengths, using exact values.<br><div>  </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Lesson 3 Week 5                                                                                              | UNIT TEST / Review                                                                                 |                     |                                               |                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| Learning Intention                                                  | Vocab                                                                                                    | Concept                  | Retrieval                                                                                       | Success Criteria                                                                                                                                                                             | Red Zone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |       |       |        |             |     |  |  |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|-------|--------|-------------|-----|--|--|
| Lesson 4 Week 5<br>Can I calculate probabilities for single events. | Probability<br>Fraction<br>Decimal<br>Percentage<br>Event<br>Outcome<br>Mutually exclusive<br>Exhaustive | STATISTICS & PROBABILITY | Write probability as a fraction, a decimal and a percentage.<br><br>Add and subtract fractions. | I will be able to: <ul style="list-style-type: none"><li>Calculate simple probabilities from equally likely events.</li><li>Understand mutually exclusive and exhaustive outcomes.</li></ul> | <div><b>Exam-style question</b><br/><br/>6 There are only 4 red counters, 5 blue counters and 2 green counters in a bag. One counter is taken at random from the bag. Write down the probability that this counter is blue. (2 marks)</div> <div><b>Exam-style question</b><br/><br/>9 The probability that a new cooker has a fault is 0.025. What is the probability that a new cooker does not have a fault? (1 mark)</div> <div><b>Exam-style question</b><br/><br/>18 There are only white cubes, green cubes and yellow cubes in a box. The table shows the probability of taking at random a white cube from the box.<table><tr><td>Colour</td><td>white</td><td>green</td><td>yellow</td></tr><tr><td>Probability</td><td>0.6</td><td></td><td></td></tr></table>The number of green cubes in the box is the same as the number of yellow cubes in the box.<br/>a Copy and complete the table. (2 marks)<br/>There are 9 white cubes in the box.<br/>b Work out the total number of cubes in the box. (2 marks)</div> | Colour | white | green | yellow | Probability | 0.6 |  |  |
| Colour                                                              | white                                                                                                    | green                    | yellow                                                                                          |                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |       |       |        |             |     |  |  |
| Probability                                                         | 0.6                                                                                                      |                          |                                                                                                 |                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |       |       |        |             |     |  |  |

| Learning Intention                                                                 | Vocab                                                                                                    | Concept                  | Retrieval                                                                           | Success Criteria                                                                                                                                                                         | Red Zone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |           |       |    |   |     |      |      |   |    |       |      |   |    |  |      |  |  |  |  |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------|-------|----|---|-----|------|------|---|----|-------|------|---|----|--|------|--|--|--|--|
| Lesson 1 Week 6<br>Can I calculate probabilities for two events?                   | Probability<br>Fraction<br>Decimal<br>Percentage<br>Event<br>Outcome<br>Mutually exclusive<br>Exhaustive | STATISTICS & PROBABILITY | List outcomes.<br><br>Simplify fractions.                                           | I will be able to: <ul style="list-style-type: none"><li>Use two-way tables to record the outcomes from two events.</li><li>Work out probabilities from sample space diagrams.</li></ul> | <div>Two fair spinners are spun.<br/><br/>a Copy and complete the two-way table showing the possible outcomes.<table border="1" data-bbox="1532 453 1968 555"><tr><th></th><th>Red</th><th>Green</th><th></th><th></th></tr><tr><th>Red</th><td>R, R</td><td>R, G</td><td></td><td></td></tr><tr><th>Green</th><td>G, R</td><td></td><td></td><td></td></tr><tr><th>Blue</th><td></td><td></td><td></td><td></td></tr></table><br/>Work out<br/>b <math>P(R, R)</math>      c <math>P(\text{at least one green})</math>      d <math>P(Y, Y)</math><br/>e <b>Reasoning</b> Mischa says, 'The probability of getting at least one blue is <math>\frac{7}{24}</math> because there are 24 letters in the table and 7 of them are B.' Explain why Mischa is wrong.</div> <div>11 a Copy and complete this sample space diagram for the possible outcomes of throwing a fair dice twice.<br/>b Work out<br/>i <math>P(4, 2)</math><br/>ii <math>P(\text{1st throw is } 3)</math><br/>iii <math>P(\text{both numbers are the same})</math><br/>iv <math>P(\text{one of the numbers is } 3)</math><br/><br/><b>Exam-style question</b><br/>12 Kate throws an ordinary six-sided fair dice twice. She says, 'The probability of getting 1 on both throws is <math>\frac{2}{6}</math>.' Is Kate correct? You must explain your answer. (1 mark)<br/><b>Exam tip</b><br/>Show working and write a sentence to explain your answer.</div> |       | Red       | Green |    |   | Red | R, R | R, G |   |    | Green | G, R |   |    |  | Blue |  |  |  |  |
|                                                                                    | Red                                                                                                      | Green                    |                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |           |       |    |   |     |      |      |   |    |       |      |   |    |  |      |  |  |  |  |
| Red                                                                                | R, R                                                                                                     | R, G                     |                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |           |       |    |   |     |      |      |   |    |       |      |   |    |  |      |  |  |  |  |
| Green                                                                              | G, R                                                                                                     |                          |                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |           |       |    |   |     |      |      |   |    |       |      |   |    |  |      |  |  |  |  |
| Blue                                                                               |                                                                                                          |                          |                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |           |       |    |   |     |      |      |   |    |       |      |   |    |  |      |  |  |  |  |
| Lesson 2 Week 6<br>Can I calculate experimental probabilities based on given data? | Probability<br>Fraction<br>Decimal<br>Percentage<br>Event<br>Outcome<br>Experiment<br>Data               | STATISTICS & PROBABILITY | Convert fractions, decimals and percentages. Compare fractions. Use two-way tables. | I will be able to: <ul style="list-style-type: none"><li>Find and interpret probabilities based on experimental data.</li><li>Make predictions from experimental data.</li></ul>         | <div><b>Exam-style question</b><br/>10 a Tony throws a biased dice 100 times. The table shows his results. He throws the dice once more. Find an estimate for the probability that he will get a 5. (1 mark)<br/>b Tony rolls the biased dice 200 more times. He gets 5 in 37 of these rolls. Work out the best estimate of getting 5. (2 marks)<table border="1" data-bbox="1895 1126 2051 1315"><tr><th>Score</th><th>Frequency</th></tr><tr><td>1</td><td>25</td></tr><tr><td>2</td><td>12</td></tr><tr><td>3</td><td>15</td></tr><tr><td>4</td><td>11</td></tr><tr><td>5</td><td>20</td></tr><tr><td>6</td><td>17</td></tr></table></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Score | Frequency | 1     | 25 | 2 | 12  | 3    | 15   | 4 | 11 | 5     | 20   | 6 | 17 |  |      |  |  |  |  |
| Score                                                                              | Frequency                                                                                                |                          |                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |           |       |    |   |     |      |      |   |    |       |      |   |    |  |      |  |  |  |  |
| 1                                                                                  | 25                                                                                                       |                          |                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |           |       |    |   |     |      |      |   |    |       |      |   |    |  |      |  |  |  |  |
| 2                                                                                  | 12                                                                                                       |                          |                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |           |       |    |   |     |      |      |   |    |       |      |   |    |  |      |  |  |  |  |
| 3                                                                                  | 15                                                                                                       |                          |                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |           |       |    |   |     |      |      |   |    |       |      |   |    |  |      |  |  |  |  |
| 4                                                                                  | 11                                                                                                       |                          |                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |           |       |    |   |     |      |      |   |    |       |      |   |    |  |      |  |  |  |  |
| 5                                                                                  | 20                                                                                                       |                          |                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |           |       |    |   |     |      |      |   |    |       |      |   |    |  |      |  |  |  |  |
| 6                                                                                  | 17                                                                                                       |                          |                                                                                     |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |           |       |    |   |     |      |      |   |    |       |      |   |    |  |      |  |  |  |  |

| Learning Intention                                                                                | Vocab                                                                                              | Concept                             | Retrieval                                                                                                                                     | Success Criteria                                                                                                                                                                                                | Red Zone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Lesson 3 Week 6</p> <p>Can I use venn diagrams to display outcomes and find probabilities?</p> | <p>Probability</p> <p>Event</p> <p>Outcome</p> <p>Venn</p> <p>Intersect</p> <p>Union</p>           | <p>STATISTICS &amp; PROBABILITY</p> | <p>Add and subtracting equivalent fractions.</p> <p>List primes and multiples.</p> <p>Calculate probabilities.</p>                            | <p>I will be able to:</p> <ul style="list-style-type: none"> <li>Use Venn diagrams to work out probabilities.</li> <li>Understand the language of sets and Venn diagrams.</li> </ul>                            | <div> <p><b>Exam-style question</b></p> <p>8 <math>\mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}</math><br/> <math>A = \{1, 4, 7, 9, 10\}</math><br/> <math>B = \{4, 6, 10\}</math></p>  <p>a Complete the Venn diagram to represent this information. (3 marks)</p> <p>A number is chosen at random from the universal set <math>\mathcal{E}</math>.</p> <p>b Find the probability that the number is in the set <math>A \cap B</math>. (2 marks)</p> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p>Lesson 1 Week 7</p> <p>Can I use tree diagrams to calculate probabilities for two events?</p>  | <p>Probability</p> <p>Event</p> <p>Outcome</p> <p>Tree</p> <p>And</p> <p>Or</p> <p>Independent</p> | <p>STATISTICS &amp; PROBABILITY</p> | <p>List the possible outcomes for two events.</p> <p>Work out the probability of something not happening.</p> <p>Calculate probabilities.</p> | <p>I will be able to:</p> <ul style="list-style-type: none"> <li>Use frequency trees and tree diagrams.</li> <li>Work out probabilities using tree diagrams.</li> <li>Understand independent events.</li> </ul> | <div> <p><b>Exam-style question</b></p> <p>4 30 people work in an office.<br/> 18 of these people are female.<br/> 7 of the males are aged 40 or over.<br/> 15 of the 30 people are under 40.<br/> Copy and complete the frequency tree for this information. (3 marks)</p>  <p><b>Exam tip</b><br/> Check that each pair of numbers adds to the correct total.</p> </div> <div> <p>A bag contains 8 green marbles and 5 purple marbles. Eliza picks a marble at random, notes its colour and replaces it in the bag. She then picks a second marble.</p> <p>a Copy and complete the tree diagram.</p> <p>b Work out</p> <ol style="list-style-type: none"> <li>the probability that Eliza picks one marble of each colour</li> <li>the probability that Eliza picks at least one green</li> </ol>  </div> |

| Learning Intention                                                              | Vocab                                                               | Concept                  | Retrieval                                                                                                           | Success Criteria                                                                                                                                                                                | Red Zone                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lesson 2 Week 7<br>Can I use tree diagrams for events that are not independent? | Probability<br>Event<br>Outcome<br>Tree<br>And<br>Or<br>Independent | STATISTICS & PROBABILITY | Calculate with and simplify fractions.<br>Work out probabilities using tree diagrams.<br>Complete a frequency tree. | I will be able to: <ul style="list-style-type: none"> <li>Understand when events are not independent.</li> <li>Solve probability problems involving events that are not independent.</li> </ul> | <div> <p><b>Exam-style question</b></p> <p><b>9</b> There are 8 socks in a drawer.<br/>5 of the socks are white. 3 of the socks are grey.<br/>Maya takes two socks from the drawer at random.</p> <p><b>a</b> Complete the probability tree diagram.</p> <div> <p>1st sock      2nd sock</p> </div> <p><b>(2 marks)</b></p> <p><b>b</b> Work out the probability that Maya takes two socks of the same colour. <b>(3 marks)</b></p> </div> |
| Lesson 3 Week 7                                                                 | UNIT TEST / Review                                                  |                          |                                                                                                                     |                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Lesson 4 Week 7<br>Can I calculate a percentage change?                         | Percentage<br>Profit<br>Loss<br>Increase<br>Decrease<br>Original    | NUMBER                   | Convert percentages to decimals.<br>Express one number as a percentage of another.                                  | I will be able to: <ul style="list-style-type: none"> <li>Calculate a percentage profit or loss.</li> <li>Express a given number as a percentage of another in more complex</li> </ul>          | <div> <p><b>Exam-style question</b></p> <p><b>19</b> Paul buys 6 kg of tomatoes to sell.<br/>He pays £15 for the tomatoes.<br/>Paul puts all the tomatoes into bags.<br/>He puts 400 g of tomatoes into each bag.<br/>He sells each bag of tomatoes for £2.20.<br/>Paul sells all the bags.<br/>Work out his percentage profit. <b>(4 marks)</b></p> </div>                                                                                |

| Learning Intention                                                                              | Vocab                                                                                     | Concept | Retrieval                                                                      | Success Criteria                                                                                                                                             | Red Zone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                 |                                                   |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------------|
| Lesson 1 Week 8<br>Can I work in reverse to find the original amount after a percentage change? | Percentage<br>Profit<br>Loss<br>Increase<br>Decrease<br>Reverse<br>Original<br>Multiplier | NUMBER  | Work out percentage increase or decrease.                                      | I will be able to: <ul style="list-style-type: none"><li>Find the original amount given the final amount after a percentage increase.</li></ul>              | <div>Exam-style question</div> <div>7 In a sale, the normal price of a hat is reduced by 30%.<br/>The sale price of the hat is £6.30.<br/>Work out the normal price of the hat. (2 marks)</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                 |                                                   |
| Lesson 2 Week 8<br>Can I use calculate a repeated percentage change?                            | Percentage<br>Increase<br>Decrease<br>Original<br>Multiplier                              | NUMBER  | Write powers of numbers in index form.<br><br>Convert percentages to decimals. | I will be able to: <ul style="list-style-type: none"><li>Find an amount after repeated percentage change.</li><li>Solve growth and decay problems.</li></ul> | <div>Exam-style question</div> <div>15 Pounds Bank has two types of account.<br/>Both pay compound interest.</div> <div><table><tr><td><b>Cash saver</b><br/>Interest<br/>1.2% per annum</td><td><b>Shares saver</b><br/>Interest<br/>1.9% per annum</td></tr></table><p>Annie invests £3100 in the cash saver account.<br/>Jo invests £2950 in the shares saver account.</p><p>a Work out who will get more interest by the end of 3 years.<br/>You must show your working. (4 marks)</p><p>b In the third year, the rate of interest for the shares account is changed to 2%.<br/>Does this affect who will get more interest by the end of 3 years?<br/>Give a reason for your answer. (1 mark)</p></div> <div>Exam tip</div> <div>Always think carefully about your multiplier when working out compound interest.</div> | <b>Cash saver</b><br>Interest<br>1.2% per annum | <b>Shares saver</b><br>Interest<br>1.9% per annum |
| <b>Cash saver</b><br>Interest<br>1.2% per annum                                                 | <b>Shares saver</b><br>Interest<br>1.9% per annum                                         |         |                                                                                |                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                 |                                                   |
| Lesson 3 Week 8                                                                                 | EXAM PRACTISE / REVIEW                                                                    |         |                                                                                |                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                 |                                                   |