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**Mathematics Faculty**

**Year 11 Higher - Autumn Term 2**

**Unit 5 Overview – Trigonometry**

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| **Topic** | **Key Ideas** | **Progress** | | |
| **R** | **A** | **G** |
| **Trigonometry** | I can use Pythagoras’ theorem and trigonometry to solve problems in 3D. |  |  |  |
| I can apply the sine and cosine rules to find unknown lengths and angles. |  |  |  |
| I can calculate the area of a triangle and a segment. |  |  |  |
| I can recognise the graphs of the trigonometric functions and use them to solve equations. |  |  |  |

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| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Using Pythagoras’ theorem in 3D problems (CM clip 259) | Formative assessment strategies e.g. MWBs, whole class questioning, Diagnostic Questions, SLOP time with self-assessment, Live Marking etc.  Assessment is also supported with our use of ILOs, set through Century Learning, Corbettmaths, Dr Frost Maths and Justmaths.  Finally, units are assessed through staples challenges and half termly assessments, as part of our Assessment Calendar in Mathematics. | Pythagoras’ theorem, triangle, right angle, hypotenuse, diagonal |
| **2** | Using trigonometry in 3D problems (CM clip 332) | trigonometry, sine cosine, tangent, opposite, adjacent, hypotenuse, triangle, right angle, plane |
| **3** | **Using the sine rule to find unknown lengths (CM clip 333)** | sine, triangle, length, angle |
| **4** | **Using the sine rule to find unknown angles (CM clip 334)** | sine, triangle, length, angle |
| **5** | **Using the cosine rule to find unknown lengths (CM clip 335)** | cosine, triangle, length, angle |
| **6** | **Using the cosine rule to find unknown angles (CM clip 336)** | cosine, triangle, length, angle |
| **7** | **Applying area = ½ absinC to calculate the area, sides or angles of a triangle (CM clip 337)** | triangle, area, length, angle, sine |
| **8** | Calculating the area of a segment (CM clip 63) | triangle, area, length, angle, sine, sector |
| **9** | Sketching the graphs of trigonometrical functions. Using the graphs to solve equations (CM clip 338 – 340) | sine, cosine, tangent, function, symmetry, periodic, equation, solve |