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**Mathematics Faculty**

**Year 10 Unit 5 Overview**

**Angles and Trigonometry**

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| **Topic** | **Key Ideas** | **Progress** |
| **R** | **A** | **G** |
| **Angles and Trigonometry** | I can find and use the interior and exterior angles of polygons |  |  |  |
| I can use Pythagoras' Theorem to find a missing side of a right angled triangle |  |  |  |
| I can use trigonometric Ratios to find missing properties of right angled triangles |  |  |  |
| I can recall the exact values of sine, cosine and tangent on some angles (0°, 30°, 45°,60°, 90°) and use them to solve problems |  |  |  |

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| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Deriving and using the sum of angles in a triangle and in a quadrilateral.(CM 33 & 37) (MW 121) | 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 that alternate between Basic Skills Checks one week and then a more individual ILO the following week through Mathswatch and Corbettmaths (see learning focus). Finally every unit is assessed half termly as part of our Assessment Calendar in Mathematics. | Angle, sum, internal, quadrilateral, triangle |
| **2** | Deriving and using the fact that the exterior angle of a triangle is equal to the sum of the two opposite interior angles.(CM 37) (MW 121) | Angle, Triangle, isosceles, internal, sum |
| **3** | Calculating the sum of the interior angles of a polygon.(CM 32) (MW 123) | Angle, Polygon, sum, interior |
| **4** | Calculating the sum of the exterior angles of a polygon.(CM 32) (MW 123) | Angle, Polygon sum, exterior |
| **5** | Calculating the length of the hypotenuse in a right-angled triangle.(CM 257) (MW 150a) | Pythagoras’, Hypotenuse, right angle, square, square root |
| **6** | Calculating the length of a shorter side in a right-angled triangle.(CM 257) (MW 150a) | Pythagoras’, Hypotenuse, right angle, square, square root |
| **7** | Using trigonometric ratios to find lengths in a right-angled triangle.(CM 330) (MW 168) | Trigonometry, Sine, Cosine, Tangent, Opposite. Adjacent, Hypotenuse, SOHCAHTOA |
| **8** | Using trigonometric ratios to calculate an angle in a right-angled triangle.(CM 331) (MW 168) | Trigonometry, Sine, Cosine, Tangent, Opposite. Adjacent, Hypotenuse, SOHCAHTOA |
| **9** | Finding angles of elevation and angles of depression.(CM 331) (MW 168) | Trigonometry, Sine, Cosine, Tangent, Opposite. Adjacent, Hypotenuse, SOHCAHTOA |
| **10** | Know the exact values of the sine, cosine and tangent of some angles.(CM 341) (MW 173) | Trigonometry, Sine, Cosine, Tangent, Opposite. Adjacent, Hypotenuse, SOHCAHTOA |