****

**Mathematics Faculty**

**Year 10 Higher – Summer Term 2**

**Unit 11 Overview – Transformations and Similarity**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Topic** | **Key Ideas** | **Progress** | | |
| **R** | **A** | **G** |
| **Transformations and Similarity** | I can transform shapes by a combination of reflections, rotations, translations and enlargements. |  |  |  |
| I can identify invariant points following a transformation. |  |  |  |
| I can recognise similar shapes. |  |  |  |
| I understand the effect of enlargement on perimeter, area and volume. |  |  |  |
| I can calculate similar areas and volumes. |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Transforming shapes by a combination of reflections, rotations and translations. Describing transformations. Mapping a point on a shape under a combination of transformations. (CM clips 272 – 274, 275 & 325 – 326) | 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 skills checks and half termly assessments, as part of our Assessment Calendar in Mathematics. | transformation, reflection, symmetry, equation, rotation, direction, (anti-)clockwise, degree, centre, translation, vector, direction |
| **2** | **Enlarging shapes by a** positive, fractional and **negative scale factor** and describing enlargements (CM clips 104 – 109) | transformation, enlargement, scale factor, positive, negative, fractional, centre |
| **3** | **Understanding and using the term ‘invariance’ for points, lines and shapes achieved by single or combined transformations** (CM clip 392) | invariant, invariance, transformation, point, line, coordinate, equation |
| **4** | **Identifying similar shapes and calculating missing lengths on similar shapes** (CM clips 291 – 292) | similar, similarity, triangle, length, angle, enlargement, scale factor |
| **5** | **Calculating similar areas and volumes** (CM clips 293a & b) | similar, scale factor, length, area, volume, square, cube |