****

**Mathematics Faculty**

**Year 11 Higher - Autumn Term 1**

**Unit 2 Overview - Algebraic Graphs 2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Topic** | **Key Ideas** | **Progress** | | |
| **R** | **A** | **G** |
| **Algebraic Graphs 2** | I can construct and interpret quadratic graphs. |  |  |  |
| I can solve linear and quadratic simultaneous equations graphically. |  |  |  |
| I can construct and interpret cubic, reciprocal and exponential graphs. |  |  |  |
| I can recognise a graph from its shape. |  |  |  |
| I can use the equation of a circle centred at the origin. |  |  |  |
| I can find the equation of a tangent to a circle at a given point. |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | **Constructing and interpreting quadratic graphs (CM clips 264 & 265)** | 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. | quadratic, table of values, parabola, axis, intercept, root, turning point, minimum, maximum, completing the square, symmetry, equation, solution |
| **2** | Finding approximate solutions to linear and quadratic equations graphically (CM clip 298) | linear, quadratic, simultaneous equation, solution, intersection |
| **3** | Constructing and interpreting cubic graphs (CM clip 344) | cubic, table of values, equation, substitute, intercept |
| **4** | Constructing and interpreting reciprocal graphs (CM clip 346) | reciprocal, table of values, equation, substitute |
| **5** | Constructing and interpreting exponential graphs (CM clip 345) | exponential, table of values, equation, substitute |
| **6** | **Recognising and using the equation of a circle with centre at the origin (CM clip 12)** | equation, circle, radius, origin, centre |
| **7** | **Finding the equation of a tangent to a circle at a given point (CM clip 372)** | equation, circle, radius, origin, centre, tangent, radius, gradient, perpendicular, reciprocal, negative |