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**Mathematics Faculty**

**Year 9 Summer Term 1 - Alpha Scheme**

**Unit 10 Overview - Algebraic Graphs**

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| **Topic** | **Key Ideas** | **Progress** |
| **R** | **A** | **G** |
| **Algebraic Graphs** | I can calculate gradients numerically and graphically. |  |  |  |
| I can interpret intercepts graphically. |  |  |  |
| I can find the equation of a line given the gradient and a point or two points. |  |  |  |
| I can plot and interpret quadratic graphs. |  |  |  |
| I can find approximate solutions to linear and quadratic equations using graphs. |  |  |  |
| I can recognise, sketch and interpret graphs of cubic and reciprocal functions. |  |  |  |

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| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Calculating gradients numerically and graphically. Interpreting intercepts graphically (CM clips 189 & 190) | 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 and Corbettmaths.Finally, units are assessed through skills checks and half termly assessments, as part of our Assessment Calendar in Mathematics. | gradient, rate, change, intercept, axis, coordinate, graph |
| **2** | **Finding the equation of a line given the gradient and a point** (CM clips 189 & 194) | equation, gradient, intercept, point, coordinate, substitute |
| **3** | Finding the equation of a line given two points (CM clips 190 & 195) | equation, gradient, intercept, point, coordinate, substitute |
| **4** | Completing a table of values for quadratic graphs and plotting the corresponding graph. Finding roots and turning points by eye. (CM clip 264) | coordinate, generate, graph, quadratic, equation, substitute, plot, root, turning point |
| **5** | Finding approximate solutions to linear and quadratic equations using graphs (CM clips 267c & 297)  | linear, quadratic, equation, solve, intersection |
| **6** | **Recognising, sketching and interpreting graphs of cubic and reciprocal functions** (CM clips 344 & 346) | graph, function, cubic, reciprocal, sketch, interpret |