****

**Mathematics Faculty**

**Year 11 Higher - Autumn Term 1**

**Unit 1 Overview - Algebraic Graphs 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Topic** | **Key Ideas** | **Progress** | | |
| **R** | **A** | **G** |
| **Algebraic Graphs 1** | I can identify gradients and intercepts algebraically and graphically. |  |  |  |
| I can plot linear graphs. |  |  |  |
| I can find the equation of a straight line. |  |  |  |
| I can the equation of lines which are parallel and perpendicular to a given line. |  |  |  |
| I can solve simultaneous equations graphically. |  |  |  |
| I can represent inequalities on a coordinate grid. |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Identifying gradients and intercepts of linear functions algebraically (CM clip 191) | 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. | gradient, rate of change, intercept, linear, equation, rearrange |
| **2** | Identifying gradients and intercepts of linear functions graphically. Calculating the length of a line segment (CM clips 189, 190 & 263) | gradient, rate of change, intercept, linear, coordinate, axis, Pythagoras’ theorem |
| **3** | Plotting linear graphs (CM clips 186 & 187) | linear, table of values, substitute, equation, plot, intercept, gradient, positive, negative |
| **4** | **Finding the equation of a line, given its gradient and a point or given two points (CM clips 194 & 195)** | equation, linear, gradient, intercept, point, coordinate, substitute |
| **5** | **Finding the equation of a line which is parallel to a given line (CM clip 196)** | equation, linear, parallel, gradient, coordinate, substitute |
| **6** | **Finding the equation of a line which is perpendicular to a given line (CM clip 197)** | equation, linear, perpendicular, gradient, reciprocal, negative, coordinate, substitute |
| **7** | Finding approximate solutions to two linear equations using a graph (CM clip 297) | simultaneous equation, linear, solve, plot, intersection, coordinate, value |
| **8** | Representing inequalities on a coordinate grid (CM clips 180 – 182) | inequality, greater than, less than, linear, plot, axis, region |