****

 **Mathematics Faculty**

 **Year 10 Higher – Spring Term 1**

 **Unit 6 Overview – Equations, Inequalities and Sequences**

|  |  |  |
| --- | --- | --- |
| **Topic** | **Key Ideas** | **Progress** |
| **R** | **A** | **G** |
| **Equations, Inequalities and Sequences** | I can construct and solve linear and quadratic equations. |  |  |  |
| I can construct and solve linear and linear/quadratic simultaneous equations. |  |  |  |
| I can find approximate solutions to equations using iteration. |  |  |  |
| I can solve linear and quadratic inequalities. |  |  |  |
| I can find the nth term of quadratic sequences. |  |  |  |
| I can recognise and use simple geometric sequences. |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Solving equations involving fractions (CM clips 111 & 111a) | 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. | equation, fraction, inverse, balance, solve, value |
| **2** | Setting up and solving linear equations and interpreting the solutions in context (CM clip 115) | equation, linear, fraction, construct, inverse, balance, solve, value, interpret, context |
| **3** | **Solving quadratic equations by factorising** (CM clip 266) | equation, quadratic, solve, factorise, factor, sum, product |
| **4** | **Solving quadratic equations by using the formula** (CM clip 267) | equation, quadratic, solve, formula |
| **5** | **Solving quadratic equations by completing the square** (CM clip 267a) | equation, quadratic, solve, square, inverse |
| **6** | Setting up and solving quadratic equations and interpreting the solutions in context (CM clips 266 – 267) | equation, quadratic, construct, solve, factorise, factor, formula, interpret, context |
| **7** | **Solving simultaneous linear equations** (CM clip 295) | equation, simultaneous, linear, solve, eliminate |
| **8** | Deriving and solving two simultaneous equations and interpreting the equations in context (CM clip 295) | equation, simultaneous, linear, construct, solve, eliminate |
| **9** | Solving simultaneous equations where one is linear and the other quadratic (CM clip 298) | equation, simultaneous, linear, quadratic, solve, substitute |
| **10** | **Finding approximate solutions to equations numerically using iteration. Understanding and using suffix notation** (CM clip 373) | iteration, notation, suffix, equation, solve, rearrange, converge, decimal place |
| **11** | **Solving linear inequalities and representing the solution set on a number line** (CM clips 177 – 179) | inequality, linear, solve, inverse, balance, solution, number line |
| **12** | Solving quadratic inequalities, representing the solution set using set notation and on a graph (CM clip 378) | inequality, quadratic, solve, notation, graph |
| **13** | **Deducing expressions to calculate the nth term of quadratic sequences** (CM clips 388 a-c) | sequence, quadratic, nth term, square, difference, term, expression |
| **14** | Recognising and using simple geometric sequences (CM clip 375) | sequence, geometric, multiply |