**Mathematics Faculty**

**Unit 6 Overview**

**Equations and Sequences**

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| **Topic** | **Key Ideas** | **Progress** | | |
| **R** | **A** | **G** |
| **Equations and Sequences** | I can solve equations involving brackets and unknowns on both sides |  |  |  |
| I can solve equations with fractions |  |  |  |
| I can solve inequalities and represent solutions on a number line |  |  |  |
| I can represent inequalities graphically |  |  |  |
| I can solve simultaneous equations |  |  |  |
| I can factorise quadratics and solve quadratic equations |  |  |  |
| I can calculate geometric progressions |  |  |  |
| I can find the *nth* term of a quadratic sequence |  |  |  |

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| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Solving equations involving brackets and unknowns on both sides (MW clip A19b and CM clips 110 & 113) | 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 that alternate between Basic Skills Checks one week and then a more individual ILO the following week through Maths watch and Corbett maths (see learning focus).  Finally, every unit is assessed half termly as part of our Assessment Calendar in Mathematics. | equation, solve, bracket, expand, unknown, variable, coefficient, balance, inverse |
| **2** | Solving equations with fractions (MW clip A19a and CM clip 111) | equations, solve, unknown, variable, coefficient, fraction, denominator, numerator, balance, inverse |
| **3** | Solving inequalities and represent inequalities on a number line (MW clip A20a & b and CM clips 176, 177, 178 & 179) | solve, inequality, unknown, variable, coefficient, less than, greater than, equal, number line, boundary, circle, open, closed |
| **4** | Representing inequalities graphically (MW clip A27a and CM clips 180 & 181) | Inequality, less than, greater than, equal, boundary, graph, axis, line |
| **5** | Solving simultaneous equations (MW clip A24b and CM clips 295 & 296) | simultaneous, equation, coefficient, variable, addition, subtraction, solve, eliminate |
| **6** | Factorising quadratics, including those with a coefficient of x2 greater than one (MW clip A9 and CM clips 118 & 119) | factorise, quadratic, constant, brackets, coefficient, variable, commutative |
| **7** | Solving quadratic equations (CM clip 266) | factorise, quadratic, solve, brackets, unknown, commutative, coefficient, variable, constant |
| **8** | Calculating geometric progressions (CM clip 375) | sequence, progression, geometric, rule, multiply, term |
| **9** | Calculating the nth term of a quadratic sequence (MW clip A23a) | quadratic, sequence, term, nth term, difference, rule, formula |