**Curriculum Related Expectations**

HT3: Year 8 Algebraic Techniques

**Students can define the following terms:**

|  |  |  |
| --- | --- | --- |
| arithmetic | coefficient | difference |
| equivalent | geometric | HCF |
| inequality | linear | non-linear |
| position | product | sequence  |
| simplify | substitute | term |

**Students know:**

* how to build on equivalence seen in Year 7to begin exploring expanding single brackets and factorising
* how to expand two binomials
* how to extend knowledge of solving equations to include those with brackets and unknowns on both sides
* the processes to solve formal inequalities and the meaning of a solution set
* how to form and solve equations
* how to use sequences with more complex algebraic rules with the increased familiarity of algebraic notation
* the method to find the nth term of a sequence

**Students can:**

* identify variables and express relationships between variables algebraically
* begin to model situations mathematically and express the results using a range of formal mathematical representations
* substitute numerical values into formulae and expressions, rearrange, simplify and solve equations
* use the vocab of expressions, equations, inequalities, terms and factors
* simplify and manipulate algebraic expressions (collect like terms, multiply over a single bracket, take out common factors, expand products of two or more binomials)
* understand and use standard mathematical formulae
* use algebraic methods to solve linear equations in one variable
* generate terms of a sequence from either a term-to-term or a position-to-term rule
* recognise arithmetic sequences and find the nth term
* recognise geometric sequences
* use and interpret algebraic notation including indices
* use language and properties precisely to analyse algebraic expressions
* begin to model situations mathematically and express results using a range of formal mathematical representations