**** **Mathematics Faculty**

**Year 8 Autumn Term 1 – Sigma Scheme**

**Unit 1 Overview - 4 Operations**

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| **Topic** | **Key Ideas** | **Progress** |
| **R** | **A** | **G** |
| **4 Operations** | I can use the 4 operations with decimals. |  |  |  |
| I can apply the laws of indices. |  |  |  |
| I can convert between standard form and ordinary numbers and order numbers written in these forms. |  |  |  |
| I can use the 4 rules with numbers written in standard form.  |  |  |  |

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| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Understanding place value and ordering positive and negative decimals (CM clips 95 & 222) | 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. | place value, integer, decimal, hundred, ten, unit, tenth, hundredth, order, positive, negative |
| **2** | Adding and subtracting decimals (CM clips 90 &91) | addition, subtraction, sum, total, plus, difference, take away, minus, integer, decimal |
| **3** | Multiplying and dividing decimals by negative powers of ten (CM clips 92 & 94) | decimal, multiply, divide, power, index |
| **4** | Multiplying decimals, including negative decimals. Understanding the effect of multiplying by a number smaller than one. (CM clip 94) | multiply, product, total, column, grid, lattice, integer, decimal |
| **5** | Dividing decimals, including negative decimals. Understanding the effect of dividing by a number smaller than one. (CM clips 92 & 93) | division, divisor, quotient, remainder, integer, decimal, chunking |
| **6** | Solving multi-step problems involving the 4 operations and decimals (CM clips 90 – 94) | addition, sum, total, subtract, take away, minus, difference, multiply, product, division, quotient, integer, decimal |
| **7** | **Knowing and applying the laws of indices including multiplication, division, power 0, power 1 and stacked indices** (CM clip 174)  | index, indices, power, exponent, base, simplify, expression, multiply, divide |
| **8** | **Writing numbers in standard form or as ordinary numbers** (CM clip 300) | standard form, power, index |
| **9** | Ordering numbers written in standard form and as ordinary numbers (CM clip 300) | standard form, power, index, convert |
| **10** | Using the 4 operations with numbers written in standard form (CM clips 301 - 303) | standard form, power, index, law, multiplication, division, addition, subtraction |