**Year 9 U/M Band AP Topic List**

**Non-Calculator Skills**

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| Topic |
| **Use knowledge of the order of operations, including using brackets, to carry out calculations involving the four operations. Example: 3 × (117 – 95), (3 × 4) + 16** |
| **Interpret dual bar charts** |
| **Produce bar charts including dual bar chart** |
| **Calculate simple percentages** |
| **Make estimates and approximations of calculations – use a range of ways to find an approximate answer** |
| **Find the prime factor decomposition of a number less than 100** |
| **Use the LCM to solve problems** |
| **Solve simple linear equations with integer coefficients, of the form *ax* = *b* or *x* ± *b* = *c*, e.g. 2*x* = 18, *x* + 7 = 12 or *x* – 3 = 15** |
| **Solve linear equations which involve brackets, including those that have negative signs and those with a negative solution** |
| **Understand the difference between an expression and an equation and the meaning of the key vocabulary 'term'** |
| **Construct and solve simple linear equations with unknown on one side** |
| **Simplify after multiplying a single term over a bracket** |
| **Convert improper fractions to mixed numbers; convert mixed numbers to improper fractions.** |
| **Simplify algebraic expressions by collecting like terms** |
| **Simplify simple expressions involving index notation** |
| **Describe correlation by inspection: strong or weak; positive, negative or zero** |
| **Use a line of best fit, or otherwise, to predict values of one variable given values of the other variable** |
| **Show inequalities on a number line** |
| **Solve simple linear inequalities in one variable and represent the solution on a number line e.g. 3*n* + 2 <11**  |

**Calculator Skills**

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| Topic |
| **Find the next term in a sequence, including negative values** |
| **Find a specific term in the sequence using term-to-term rules** |
| **Understand the different role of letter symbols in formulae and functions** |
| **Substitute numbers into simple formulae** |
| **Extend the percentage calculation strategies with jottings to find any percentage (e.g. 17.5% by finding 10%, 5% and 2.5%, and adding together)** |
| **Use an extended range of calculator functions, including +, –, *x*, , *x*², , memory, *xy*, *x*, brackets** |
| **Round numbers to significant figures** |
| **Produce pie charts for categorical data and discrete/continuous numerical data** |
| **Substitute a positive value into the expression *x*²** |