Throughout the training year you are required to take personal responsibility for renewing and updating your subject knowledge, identifying areas for development, setting personal targets and addressing any areas of weakness. This process commences now, before the course starts, and will continue throughout.

RAG Rate your confidence in each area with a grade. **RED (High) Green (Low)** Highlight the statements which you believe require development

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| **Teachers should understand :**  Number | Pre-Interview | Pre- programme | Assessment Point 1 | Assessment Point 2 | Assessment Point 3 | Assessment Point 4 |
| * Factors, Multiples and Primes |  |  |  |  |  |  |
| * Product of prime factors |  |  |  |  |  |  |
| * HCF and LCM |  |  |  |  |  |  |
| * Laws of Indices |  |  |  |  |  |  |
| * Calculations with Decimals |  |  |  |  |  |  |
| * Percentages including compound interest and reverse percentages |  |  |  |  |  |  |
| * Ratio including reasoning with ratio |  |  |  |  |  |  |
| * Proportion and recipes |  |  |  |  |  |  |
| * Fraction calculations |  |  |  |  |  |  |
| * Fractions, decimals, percentages including recurring decimals |  |  |  |  |  |  |
| * Best buys and financial maths problems |  |  |  |  |  |  |
| * Estimation and rounding |  |  |  |  |  |  |
| * Upper and lower bounds including error intervals |  |  |  |  |  |  |
| * Standard Form |  |  |  |  |  |  |
| * Surds including rationalising the denominator |  |  |  |  |  |  |
| * DIrect and Inverse Proportion |  |  |  |  |  |  |

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| **Teachers should understand :**  Algebra | Pre-Interview | Pre- programme | Assessment Point 1 | Assessment Point 2 | Assessment Point 3 | Assessment Point 4 |
| * Expand and simplify algebraic expressions including double and triple brackets |  |  |  |  |  |  |
| * Factorise including quadratic |  |  |  |  |  |  |
| * Substitute into formulae |  |  |  |  |  |  |
| * Solve and form linear equations |  |  |  |  |  |  |
| * Solve quadratic equations using factorisation, quadratic formula and completing the square |  |  |  |  |  |  |
| * Solve linear and quadratic inequalities |  |  |  |  |  |  |
| * Simplify and calculate with algebraic fractions |  |  |  |  |  |  |
| * Solve equations with algebraic fractions |  |  |  |  |  |  |
| * Change the subject of the formula |  |  |  |  |  |  |
| * Draw linear, quadratic, cubic, exponential and reciprocal graphs from a table |  |  |  |  |  |  |
| * Recognise different types of graphs |  |  |  |  |  |  |
| * Complete the square of a quadratic expression |  |  |  |  |  |  |
| * Solve linear and nonlinear simultaneous equations |  |  |  |  |  |  |
| * Solve equations using iteration |  |  |  |  |  |  |
| * Work with linear sequences- nth term, generating a sequence |  |  |  |  |  |  |
| * Recognise other sequences (geometric, Fibonacci) |  |  |  |  |  |  |
| * Find the nth term of a quadratic sequence |  |  |  |  |  |  |
| * Algebraic Proof |  |  |  |  |  |  |
| * Understand y=mx + c |  |  |  |  |  |  |
| * Work with parallel and perpendicular gradients |  |  |  |  |  |  |
| * Function notation including inverse and composite functions |  |  |  |  |  |  |
| * Distance Time Graphs |  |  |  |  |  |  |
| * Velocity Time Graphs |  |  |  |  |  |  |
| * Equation of a Circle with centre (0,0) |  |  |  |  |  |  |
| * Find the equation of a tangent to a circle |  |  |  |  |  |  |
| * Graphs of trigonometric functions |  |  |  |  |  |  |
| * Find the gradient of a tangent |  |  |  |  |  |  |
| * Estimate the area under a graph |  |  |  |  |  |  |

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| **Teachers should understand :**  Shape and Measure | Pre-Interview | Pre- programme | Assessment Point 1 | Assessment Point 2 | Assessment Point 3 | Assessment Point 4 |
| * Plans and elevations |  |  |  |  |  |  |
| * Angles in a triangle, quadrilateral, straight lines and points |  |  |  |  |  |  |
| * Angles in parallel lines |  |  |  |  |  |  |
| * Angles in regular polygons |  |  |  |  |  |  |
| * Use and prove circle theorems |  |  |  |  |  |  |
| * Solve equations in angle problems |  |  |  |  |  |  |
| * Loci and bearings |  |  |  |  |  |  |
| * Constructions of triangles and bisectors |  |  |  |  |  |  |
| * Transformations of shapes (translation, rotation, reflections and enlargements) |  |  |  |  |  |  |
| * Invariance |  |  |  |  |  |  |
| * Similarity and congruence |  |  |  |  |  |  |
| * Conversion of units and compound units |  |  |  |  |  |  |
| * Area of 2D shapes including circles |  |  |  |  |  |  |
| * Area and arc length of sectors |  |  |  |  |  |  |
| * Surface area of prisms, spheres, pyramids and cones |  |  |  |  |  |  |
| * Volume of prisms, spheres, pyramids and cones |  |  |  |  |  |  |
| * Speed Distance Time |  |  |  |  |  |  |
| * Use the density formula |  |  |  |  |  |  |
| * Pythagoras’ theorem |  |  |  |  |  |  |
| * Pythagoras in 3D |  |  |  |  |  |  |
| * Right-angled trigonometry |  |  |  |  |  |  |
| * Right angled trigonometry in 3D |  |  |  |  |  |  |
| * Exact trig values |  |  |  |  |  |  |
| * Sine and cosine rules |  |  |  |  |  |  |
| * Area of non-right angled triangles |  |  |  |  |  |  |
| * Calculating with vectors |  |  |  |  |  |  |
| * Proving vectors are parallel or on a straight line |  |  |  |  |  |  |
| * Finding the value of a scalar in vector problems |  |  |  |  |  |  |

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| **Teachers should understand :**  Statistics and Probability | Pre-Interview | Pre- programme | Assessment Point 1 | Assessment Point 2 | Assessment Point 3 | Assessment Point 4 |
| * Find the mean median and mode for listed data |  |  |  |  |  |  |
| * Find the mean median and mode for tabled data |  |  |  |  |  |  |
| * Find an estimate for the mean and median for continuous data |  |  |  |  |  |  |
| * Draw and interpret pie charts |  |  |  |  |  |  |
| * Draw and interpret stem and leaf diagrams |  |  |  |  |  |  |
| * Draw and interpret scatter graphs |  |  |  |  |  |  |
| * Draw and interpret frequency polygons and time series |  |  |  |  |  |  |
| * Draw and interpret cumulative frequency diagrams |  |  |  |  |  |  |
| * Draw and interpret box plots |  |  |  |  |  |  |
| * Draw and interpret histograms |  |  |  |  |  |  |
| * Find the median and quartiles from a histogram |  |  |  |  |  |  |
| * Product rule for counting |  |  |  |  |  |  |
| * Mutually exclusive events |  |  |  |  |  |  |
| * Relative frequency |  |  |  |  |  |  |
| * Draw and interpret two- way tables |  |  |  |  |  |  |
| * Draw and interpret frequency trees |  |  |  |  |  |  |
| * Probability trees with and without replacements |  |  |  |  |  |  |
| * Understand and use set notation |  |  |  |  |  |  |
| * Understand and use Venn diagrams |  |  |  |  |  |  |
| * Find probabilities on a Venn diagram |  |  |  |  |  |  |
| * Conditional probability |  |  |  |  |  |  |