| Topic | M2 ${ }^{\text {C }}$ * C | M3 =B | $\mathrm{M} 4=\mathrm{A}^{*} \mathrm{~A}$ |
| :---: | :---: | :---: | :---: |
| 1 | Index laws, Venn, popf | Lcm and hcf using popf |  |
| 2 | Sig fig | Upper and lower bounds of a calculation | Upper and lower bounds of a calculation involving subtraction and division |
| 3 | Recurring decimals; add subtract multiply and divide mixed fractions; Repeated percentage change, taxation, compound interest, mortgages, | Original or reverse percentage |  |
|  | Find and interpret gradients and intercepts of linear graphs <br> e.g. plot and interpret the graph of the cost of hiring a car at $£ 40$ per day plus 20p per mile |  |  |
| 4 | Interpret a straight line, | $\mathrm{Y}=\mathrm{mx}+\mathrm{c}$, gradient, intercept, parallel lines | Gradients of perpendicular lines |
|  | Pythagoras' in 2D, length of a line, midpoint of 2 coordinates, | Trig in right angle triangles, angles of elevation and depression |  |
| 5 | Scattergraphs, Line of best fit, correlation, interpolate, extrapolate, outliers, |  |  |
|  | Mean, mode, median of grouped table; median class | Cumulative freq tables, curves, IQR and medians, box plots, |  |
| 6 | Multiply a single term over a bracket, factorise, common factors, multiply out 2 brackets, | Equation and identity, Factorise quadratic expressions of the form $x^{2}+b x+c$, difference of 2 squares, set up and solve quadratic equations using factors | Factorise quadratic expressions of the form $a x^{2}+b x+c$, including more complex expressions |
| 7 | Area and perimeters of kites, parallelograms, rhombus and trapezium, volume of prisms, compound units eg density, | Arc length, area of sector, surface area and volume of cylinder, cone and sphere, compound units eg pressure, | More complex mensuration volume and surface area problems, eg, frustrums |
| 8 | Set up and solve linear equations in one unknown, including those with the unknown on both sides of the equation and equations of the form: $\frac{x}{4}+3=7$ | Simplify, multiply and divide algebraic fractions with linear or quadratic numerators and denominators, Add or subtract algebraic fractions e.g. simplify $\frac{4 x+3}{10}+\frac{6 x-5}{5}$ <br> algebraic fractions, equations of the form: $\frac{4 x+3}{10}+\frac{6 x-5}{5}=\frac{13}{2}$ | Add or subtract algebraic fractions with linear denominators <br> e.g. simplify $\frac{2}{x+2}+\frac{3}{2 x-1}$ <br> Set up and solve quadratic equations using factors and the formula; where the coefficient of $x^{2} \neq 1$ and more complex equations |
| 9 |  |  | Understand and use circle theorems |
| 10 |  |  | Understand and use stratified sampling techniques |
|  |  |  | Construct and interpret histograms for grouped continuous data with unequal class intervals |

