

Maths Nov 2023 PPE Higher Topic Checklist

| Paper 1: Non-calculator - Topic | R | A | G |
|---|---|---|---|
| Multiplying decimals | | | |
| Dividing fractions | | | |
| Dividing decimals | | | |
| Solving one step inequalities | | | |
| Squaring fractions | | | |
| Converting between mixed number and improper fractions | | | |
| Problem solving with angles on a straight line | | | |
| Recognising prime numbers | | | |
| Problem solving with ratio | | | |
| Product of prime factors (factor trees) | | | |
| Expand and simplify single brackets | | | |
| Recognising the graph $y = \frac{1}{x}$ | | | |
| Reverse mean problems | | | |
| Probability from Venn diagrams | | | |
| Set notation from Venn diagrams | | | |
| Writing numbers in standard form | | | |
| Inputting numbers into function machines | | | |
| Substituting values into functions | | | |
| Problem solving with median, interquartile range and range | | | |
| Similar and congruent triangles | | | |
| Solving linear simultaneous equations | | | |
| Substituting values into formulae | | | |
| Solving compound inequalities | | | |
| Listing outcomes and product rule for counting | | | |
| Solving equations using balancing method | | | |
| Completing the square | | | |
| Operations with surds (multiplying, dividing, adding, squaring) | | | |
| Converting recurring decimals into fractions | | | |
| Equation of a straight line | | | |
| Equations of perpendicular lines | | | |
| Using exact trig values for 0, 30, 45, 60 and 90° | | | |

| Paper 2: Calculator - Topic | R | A | G |
|---|----------|----------|----------|
| Writing ratio in the form 1:n | | | |
| Triangular numbers | | | |
| Finding a reciprocal of a number or fraction | | | |
| Reverse percentage problems (find original amount) | | | |
| Problem solving with money | | | |
| Exterior angles in regular polygons | | | |
| Completing a table of values for linear and quadratic functions | | | |
| Finding probability from a table of values | | | |
| Relative frequency | | | |
| Expanding brackets and simplifying | | | |
| Properties of parallelograms | | | |
| Co-ordinates in all 4 quadrants | | | |
| Translating shapes | | | |
| Substituting values into expressions | | | |
| Finding lengths in similar shapes | | | |
| Mean from a table of values (where data is grouped) | | | |
| Expanding two brackets | | | |
| Equation of a straight line when given a co-ordinate | | | |
| Right angled trigonometry problems (SOH CAH TOA) | | | |
| Rearranging equations (make x the subject) | | | |
| Nth term for a quadratic sequence | | | |
| Circle theorems | | | |
| Compound interest | | | |
| Iteration | | | |
| Upper and lower bounds | | | |
| Adding algebraic fractions | | | |
| Minimum point of a quadratic graph | | | |
| Graph transformations | | | |

| Paper 3: Calculator - Topic | R | A | G |
|---|----------|----------|----------|
| Finding y intercept from an equation of a straight line | | | |
| Converting between decimals and fractions (include decimals greater than 1) | | | |
| Solving equations with x on both sides | | | |
| Using map scales | | | |
| Compound depreciation | | | |
| Surface area of a cuboid | | | |
| Completing a table of values and sketching quadratic graphs | | | |
| Problem solving with ratio | | | |
| Reading from pie charts | | | |
| Right angled trigonometry (SOH CAH TOA) | | | |
| Estimating values to calculations by rounding to significant figures | | | |
| Relative frequency and experimental probability | | | |
| Calculations with speed, distance and time | | | |
| Problem solving with percentage of amounts | | | |
| Reading from histograms | | | |
| Drawing box plots | | | |
| Problem solving with Pythagoras | | | |
| Solving equations involving algebraic fractions | | | |
| Compound functions e.g. $fg(x)$ | | | |
| Algebraic proof | | | |
| Problem solving with direct proportion | | | |
| Front elevation, side elevation and plan view of shapes | | | |
| Enlargements with negative scale factor | | | |
| Problem solving with bearings and non-right-angled trigonometry (sine rule and cosine rule) | | | |