

Maths Feb 2023 PPE Higher Topic Checklist

Paper 1: Non-calculator

Topic	R	A	G
Calculations with negative numbers			
Multiplying fractions			
Converting between fractions, decimals and percentages			
Understanding the term 'identity' and \equiv notation			
Dividing an amount in a given ratio			
Finding the median and range from a table of grouped data			
Column vector notation			
Operations with fractions			
Order of operations (BiDMAS/BoDMAS)			
Solving linear inequalities			
Completing Venn diagrams			
Laws of indices			
Problem solving with ratio			
Calculations (adding/subtracting) with recurring decimals			
Straight line graphs			
Expanding 2 brackets			
Substituting values into an expression			
Cumulative frequency curves			
Problem solving with ratio			
Converting a recurring decimal to a fraction			
Equation of a circle			
Trig values for 30, 45 and 60°			
Transformations (reflection and rotation)			
Invariant points			
Solving quadratic inequalities			
Circle theorems			
Simplifying surds			

Paper 2: Calculator

Topic	R	A	G
Using a calculator accurately			
Finding the y-intercept when given the equation of a straight line graph			
Rearranging formulae			
Finding the HCF (Venn diagram method)			
Composite bar graphs			
Squares, cubes, square roots and cube roots			
Volume of a cuboid			
Surface area of a cuboid			
Triangular numbers			
Continuing a linear sequence			
Direct proportion problems			
Reading from real-life graphs			
Perimeter of a rectangle			
Finding lengths and areas in similar shapes			
Calculating percentage profit			
Converting between metric units of area			
Recognising quadratic, cubic and reciprocal graphs			
Iteration			
Box plots			
Using the quadratic formula			
Listing outcomes			
Composite functions $fg(x)$			
Inverse functions $f^{-1}(x)$			
Factorising simple cubic expressions			
Difference of 2 squares			
Reading from a histogram			
Bearings			
Vectors			
Speed-time (or velocity-time) graphs			
Probability of more than 1 event			
3D Trigonometry			

Paper 3: Calculator

Topic	R	A	G
Powers and roots			
Standard Form			
Expanding single brackets			
Percentage increase and decrease			
Area of a trapezium			
Area of a right angled triangle			
Problem solving with ratio			
Continuing a number sequence			
Gradient of a line from 2 co-ordinates			
Relative frequency			
Calculating arc length			
Speed, distance and time			
Transformations			
Probability trees			
Calculating density			
Reading from real-life graphs			
Inverse proportion problems			
Circle theorems			
Rearranging formulae			
The equation of a circle			
Conditional probability			
Negative scale factor enlargements			
Fractional scale factor enlargements			
Simplifying algebraic fractions			
Volume of a cone and sphere			
Compound interest and depreciation			
Area of a non-right angled triangle using trigonometry			
Upper and lower bounds			
Sketching exponential graphs			