

## Year 10 Mock End of Year Exams – Further Mathematics

### Exam(s):

*Paper 1: Non-Calculator – 75 Minutes*

*Paper 2: Calculator – 75 Minutes*

### Equipment list:

- Pen x2
- Pencil x2
- Calculator
- Compass
- Protractor
- Ruler

Higher Revision Topic List	
Content	SKILL
Matrices	Manipulation of Matrices Matrices with Simultaneous Equations Matrices Transformations Identity Matrix
SURDS	Simplifying SURDS Adding and Subtracting SURDS Multiplying and Dividing SURDS Rationalising the Denominator
Index Laws	Positive Indices Negative Indices Fractional Indices Expressing as Indices
Product Rule for Counting	$nCr$ $nPr$
Expanding Brackets	Expanding Double Brackets Expanding Triple Brackets Collecting Like Terms Simplifying Expressions
Pascals Triangle	Binomial Expansion Polynomials
Factorising	Factorising single and double Brackets
Rearranging Formulae	Changing the Subject of a Formula Changing subject when the subject appears more than once
Factor/Remainder Theorem	Dividing Polynomials using the factor Theorem Substituting into functions to determine whether a number is a factor
Completing the Square	Completing the Square to solve Quadratics and find Turning points of a Parabola
Sketching Functions	Sketching the functions of Quadratics, Cubics, Reciprocals, Exponentials and Straight lines
Differentiation	First differential as a function Exploring functions of Gradient Finding equations of Tangents and Normal Finding the gradient at a given coordinate Finding Stationary Points Determining the nature of a stationary point The second derivative
Harder Ratio Problem Solving	Solving Ratio problems using Algebraic Fractions

Tips on different revision techniques, including subject specific activities can be found in the [Student Study Support Guide](#).

Top Maths websites for revision are;

Maths genie - [www.mathsgenie.co.uk](http://www.mathsgenie.co.uk)

Corbett maths - [corbettmaths.com](http://corbettmaths.com)

And

Sparx maths - [www.sparxmaths.com](http://www.sparxmaths.com)