Year 11 Mock Exams Autumn Term 2023: Mathematics - Higher

Exam(s):
Paper 1: Non-Calculator (80 marks - 90 minutes)
Paper 2: Calculator (80 marks - 90 minutes)
Paper 3: Calculator (80 marks - 90 minutes)

Revision Topic List		
Content	**SKILL**	**SPARX CODE**
NUMBER		
	Fractions of amounts, Combine ratios	U881,U921,U888
	Using standard form with negative indices	
	Finding the HCF and LCM using prime factor decomposition	U534
	Index rules with positive indices, Indices of the form a/b	U250
	Finding bounds for calculations, Standard form with a calculator	U235,U772
	Adding and subtracting numbers in standard form	U587,U161
	Growth and decay	U290
	Fractions of amounts, Percentages of amounts, Writing and simplifying ratios	U988
		U916,U349,U687
	Rationalising denominators containing a single term	U707
	Adding and subtracting mixed numbers	U793
	Finding the highest common factor	U529
	Multiply with mixed numbers, Convert mixed numbers & improper fractions	U224,U692
	Prime factor decomposition	U739
ALGEBRA		
	Finding equations of straight line graphs	U315
	Using Pythagoras' theorem in 2D, Rounding decimals using significant figures	U385,U965
		U564,U632
	Multiplying column vectors by a scalar, Understanding column vectors	U676
	Calculating with ratios and algebra	U498
	Position-to-term rules for arithmetic sequences	U747
	Graphs of linear inequalities	U601
	Solving quadratic equations graphically	U592,U952
	The area rule, The sine rule	U213, U599
	Term-to-term rules, Constructing and solving equations	U450,U627
	Graphs of trigonometric functions, Using the exact values of trigonometric ratios	U929,U786,U547
	Surface area and volume of cuboids, Simultaneous equations involving quadratics	U769
		U807

	Description	Units
	Finding the turning point of a quadratic graph by completing the square	U606
	Proving the circle theorems	U144
	Expanding triple brackets	U989
	Substituting into real-life formulae	U667
	Plotting graphs of quadratic functions	U824
	Interpreting graphs of quadratic functions	U858
	Dividing algebraic fractions	U133
	Factorising quadratic expressions of the form ax^2+bx+c	U996
	Solving quadratic inequalities	U434
	Finding inverse functions	U377
	Substituting into iterative formulae	U980
	Equations of parallel lines	U103
	Graphs of cubic functions	U760
	Simplifying algebraic fractions by cancelling common factors	U593
	Solving simultaneous equations using elimination	U605,U599
	Graphs of reciprocal functions	U895
	Understanding sin,cos and tan, Constructing and solving equatio	U567,U848
	Substituting into composite functions	U958, U960
	Equations of circles & tangents, equation of a straight line from 2 points	U637
	Geometric sequences, solve quadratics of the form ax^2+bx+c=0	
	Substituting into functions	
RATIO PROPORTION		
	Constructing inverse proportion equations	U138
	Solving direct proportion word problems	U721
	Fractions of amounts, Combine ratios	U881,U921,U888
	Fractions of amounts, Writing and simplifying ratios	U916,U349,U687
	Finding unknown sides in similar shapes, Writing and simplifying	U578,U687
GEOMETRY MEASURE		
	Finding the surface area and volume of similar shapes, Combining ratios	U110,U921
	Identifying parallel vectors	U660
	Plans and elevations	U743
	Circumference of circles, Using the exact values of trigonometric (Higher)	U604,U319
	Transforming graphs	U455
	Graphs of trigonometric functions	U450
	Finding the area of compound shapes, Solving direct proportion problems	U970,U721
	Finding the volume of cylinders, Calculating with rates	U915,U256
	Finding the arc length of sectors, Finding the area of sectors	U221,U373
		U611,U882
		U121,U826,U599

	Distance from velocity-time graphs, Estimate areas under non-li... graphs	U134
		U257,U945
	Line & shape properties, Angles on parallel lines, Construct and s... equations	U781
		U786,U484
	Enlargement by a positive or negative scale factor	U766
	Drawing and interpreting scale diagrams, Finding the areas of tr...	
	Solving geometric problems using vectors	
	Finding the volume of cubes and cuboids, Finding the volume of pyramids	
	Combining transformations	
STATISTICS		
	Drawing box plots	U879
	Interpreting cumulative frequency graphs	U642
	Calculating the mean	U291
	Drawing histograms with unequal class widths	U814
	Drawing cumulative frequency graphs	U182
	Interpreting histograms	U983
	Comparing populations using box plots and cumulative frequenc... graphs	U507
PROBABILITY		
	Tree diagrams for independent events	U558
	Venn diagrams with set notation	U748
	Tree diagrams for dependent events, Multiplying algebraic fracti...	U729,U457
	Tree diagrams for dependent events	U729

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
Corbett maths - corbettmaths.com
And
Sparx maths - www.sparxmaths.com