

Year 11 F	UNIT / LESSON	OBJECTIVE	Expected Prior Knowledge
Unit 1	Algebra and Graphs		
[1 week]	Graphs of cubic and reciprocal functions	Draw and interpret graphs of cubic functions. Draw and interpret graphs of $y = 1/x$.	
	Non-linear graphs	Draw and interpret non-linear graphs to solve problems.	
	Proof	Identify expressions, equations, formulae and identities. Prove results using algebra.	
Unit 2	Quadratic equations and graphs		
[2 weeks]	Expanding double brackets	Multiply double brackets. Recognise quadratic expressions. Square single brackets.	
	Plotting quadratic graphs	Plot graphs of quadratic functions. Recognise a quadratic function. Use quadratic graphs to solve problems.	
	Using quadratic graphs	Solve quadratic equations $ax^2 + bx + c = 0$ using a graph. Solve quadratic equations $ax^2 + bx + c = k$ using a graph. Identify and interpret roots, intercepts and turning points of quadratic functions algebraically.	
	Factorising quadratic expressions	Deduce roots algebraically. Solve quadratic equations $ax^2 + bx + c = 0$ where $a=1$.	
	Solving quadratic equations algebraically		
Unit 3	Pythagoras and Trigonometry		
[1 week]	Pythagoras' Theorem & Trigonometry	Identify when to use Pythagoras' Theorem and when to use trigonometric ratios Use trigonometric ratios to solve problems Use Pythagoras' Theorem to solve problems Know the exact values of the sine, cosine and tangent of some angles.	
Unit 4	Growth and Decay		
[1 week]	Growth and decay	Find an amount after repeated percentage change. Solve growth and decay problems.	
UNIT 5	Direct and Inverse Proportion		
[1.5 weeks]	Proportion and graphs Proportion problems	Recognise and use direct proportion on a straight-line graph as a rate of change. Understand the link between the unit ratio and the gradient. Recognise different types of proportion. Solve word problems involving direct and inverse proportion. Understand that X is inversely proportional to Y is equivalent to X is proportional to $1/y$ Interpret equations that describe direct and inverse proportion	
Unit 6	Inequalities		
[1 week]	Introducing inequalities	Use correct notation to show inclusive and exclusive inequalities. Solve simple linear inequalities. Write down whole numbers which satisfy an inequality. Represent inequalities on a number line.	
	More inequalities	Solve two-sided inequalities.	
	Error Intervals	Use inequality notation to specify simple error intervals due to truncation or rounding. Apply and interpret limits of accuracy	Estimating to 1.d.p. and 1.s.f.
Unit 7	Vectors		
[1 week]	Vectors 1	Add and subtract vectors. Find the resultant of two vectors.	

Vectors 2

Subtract vectors.
Find multiples of a vector.

REVISION & MOCK EXAMS

CHRISTMAS HOLIDAY

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