Further Mathematics Timetable Year 12   2022

Wk	Date	A	B
A	07/09/22	1. Imaginary and Complex Numbers Ex 1A/B 2. Multiplying Complex Numbers 1C 3. Complex Conjugation 1D	1. Intro to Matrices Ex 6A 2. Matrix Multiplication Ex 6B 3. Determinants Ex 6C
B	12/09/22		
A	19/09/22	1. Roots of Quadratic Equations 1E 2. Solving Quartic and Cubic Equations Ex1F 3. Mixed Exercise 1 4. Argand Diagrams Exercise 2A	1. Inverse of 2 by 2 matrices Ex 6D 2. Inverse of 3 by 3 matrices Ex 6E 3. Using matrices to solve systems of equations and find nature of intersection of 3 planes Ex 6F 4. Mixed Exercise 6
B	26/09/22		
A	03/10/22	1. Modulus & Argument Ex 2B 2. Modulus Argument Form ex 2C 3. Modulus Argument Form ex 2D 4. Loci in the Argand Diagram ex 2E	1. Mixed Exercise 6 2. Linear Transformations in 2 D Ex 7A 3. Reflections, rotations and invariance in 2D Ex 7B 4. Enlargements and Stretches in 2D Ex 7C
B	10/10/22		
A	17/10/22	1. Loci in the Argand Diagram ex 2E 2. Regions in the Argand Diagram ex 2F	1. Combining Transformations Ex 7D 2. Linear Transformations in 3D Ex 7E
		Half Term	
B	31/10/22	1. Regions in the Argand Diagram ex 2F 2. Mixed Exercise 2 3. Roots of a quadratic equation ex 4A 4. Roots of a cubic equation ex 4B	1. Inverse of a Linear Transformation Ex 7F 2. Mixed Exercise 7 3. Summation of Natural Numbers Ex 3A Q1q, b,e,g,, Q2, 3, 7, 8 4. Summation of Natural Numbers Ex 3A part 2 Q4,5,6,9 – 14
A	07/11/22		
B	14/11/22	1. Roots of a quartic equation ex 4C 2. Expressions related to roots of polynomials Ex 4D 3. Linear transformations of roots Ex 4E 4. Mixed Exercise 4	1. Summation of Squares and Cubes Ex 3B Q 1, 2, 3 ,5 2. Summation of Squares and cubes part 2 Ex 3B Q 6, 7, 8, 9, 11, 13, 14 3. Mixed Exercise 3 4. Revision for test
A	21/11/22		
B	28/11/22	1. Revision for test 2. Revision for test 3. Introduce integration 4. Volumes of revolution around x-axis Ex 5A	1. Revision for test 2. Test 3. Proof by induction part 1 Ex 8A 4. Induction for summation proof part 2 Ex 8A
A	05/12/22		
B	12/12/22	1. Volumes of revolution around y –axis Ex 5B 2. Adding and subtracting volumes Ex 5C	1. Induction proof for matrices Ex 8C 2. Induction proof for divisibility part 1 Ex 8B
		Christmas	

A	03/01/23	1. Modelling with volumes of revolution Ex 5D 2. Mixed Exercise 5 **3. Parametric equations Ex 2A** **4. The Parabola Ex 2B/ 2C**	1. Induction proof for divisibility part 2 Ex 8B 2. Mixed Exercise 8 3. Prior knowledge and Pure 1 Ch 11 4. Vector equations of straight lines part 1 Ex 9A
B	09/01/23		
A	16/01/23	**1. Rectangular hyperbolas Ex 2D** **2. Tangents and Normals to Parametrics Exercise 2E** **3. Tangents and Normals to Parametrics Exercise 2E** **4. Loci Ex 2G**	1. Vector equations of straight lines part 2 Ex 9A 2. Vector equations of straight lines part 3 Ex 9A 3. Equations of a plane part 1 Ex 9B 4. Equations of a plane part 2 Ex 9B
B	23/01/23		
A	30/01/23	**1. Mixed Exercise 2** **2. Mixed Exercise 2** **3. Algebraic Methods Ex 4A** **4. Using Graphs to solve inequalities Ex 4B**	1. Dot Product Ex 9C 2. Angle between a line and a plane Ex 9D Q1a, 2 a, b, Q3 a, b , Q5 , 7, 9 – 14 3. Intersection of two lines and their nature Ex 9E Q 2, 3, 6, 7, 8, 9 4. Intersection of lines Ex 9E
B	06/02/23		
Half Term			
A	20/02/23	**1. Modulus Inequalities Ex 4C** **2. Modulus Inequalities Ex 4C**	1. Shortest distance between point and a line Ex 9F Q4, 7, 9, 11 2. Distance between 2 lines and a point and a plane Ex 9F Q1, 2 5a, 6, 8, 12
B	27/02/23	**1. Mixed Exercise 4** **2. Mixed Exercise 4** **3. Complex Numbers: Exponential Form Ex 1A** **4. Complex Numbers: Exponential Form Ex 1A**	1. Equations of planes through 3 given points 2. Mixed Exercise 9 **3. Method of differences Ex 2A 1,2,5,6** **4. Method of differences Ex 2A 4,7,10,11**
A	06/03/23		
B	13/03/23	**1. Multiplying and dividing Ex 1B** **2. Multiplying and dividing Ex 1B** **3. De Moivre's theorem Ex1C** **4. De Moivre's theorem Ex1C**	**1. Method of differences Ex 2A 3,8,12,13** 2. Vector product Ex 1A 3. Vector product Ex 1A 4. Finding areas Ex 1B
A	20/03/23		
B	27/03/23	**1. Trig identities Ex 1D** **2. Trig identities Ex 1D**	1. Triple scalar product Ex 1C 2. Straight lines Ex 1D
Easter			
A	17/04/23	1. Revision 2. Revision 3. Mock Exams 4. Mock Exams	1. Revision 2. Revision 3. Mock exams 4. Mock exams
B	24/04/23		
A	02/05/23	**1. Sum of series Ex 1E** **2. Sum of series Ex 1E**	1. Geometrical problems Ex 1E 2. Geometrical problems Ex 1E

B	08/05/23	3. **Nth roots of a complex number Ex 1F** 4. **Nth roots of a complex number Ex 1F**	3. Mixed Ex 1 4. Mixed Ex 1
A	15/05/23	1. **Solving geometric problems Ex 1G** 2. **Solving geometric problems Ex 1G** 3. **Mixed Exercise 1**	1. Go over paper 2. Mixed Ex 1 3. General vectors work 4. Integration **Pure 2 Ch 11**
B	22/05/23	4. **Mixed Exercise 1**	Introduce the chain rule and product rule in differentiation
Half Term			
A	05/06/23	1. **Mixed Exercise 1** 2. **Mixed Exercise 1** 3. Trigonometry **Pure 2 Ch 7** Addition formula Ex 7A	1. Standard functions Ex 11A 2. Integrating f(ax + b) Ex B 3. Integrating using trig functions Ex 11C 4. Reverse chain rule Ex 11D
B	12/06/23	4. Using the addition angle formula Ex 7B	
A	19/06/23	1. Double-angle formula Ex 7C 2. Solving trig equations Ex 7D	1. Integration by substitution Ex 11E 2. Integration by substitution Ex 11E 3. Integration by parts Ex 11F 4. Integration by parts Ex 11F
B	28/06/23	3. Harmonic form Ex 7E 4. Proving trig identities Ex 7F	
A	03/07/23	1. Modelling with trig identities Ex 7G 2. Mixed Exercise 7	1. Partial fractions Ex 11G 2. Differential equations Ex 11J 3. Mixed Ex 11
B	17/07/23	3. Mixed Exercise 7	