

Pure Mathematics Timetable Year 12

Week		A	B	Home learning
A	1		SET 1A,1B,1C VIDEOS AND WORK FOR NEXT LESSON.	1. Rules of indices - 1ALXC
B	2	1. Solving by factorising - 2A Quadratic formula - 2B 2. Completing the square - 2C SET 2D VIDEO AND WORK FOR NEXT LESSON. 3. Function notation - 2E	1. Introduce expectations, etc. 1D Index equations – Worksheet ask MAP SET 1E VIDEO AND WORK FOR NEXT LESSON. 2. Rationalising - 1F 3. $y = mx + c$ - 5A Gradients - 5B	2. Expanding brackets - 1B, Factorising - 1C TLW 3. Complete the square, include solving by completing the square & proof - 2D RJJ 4. Surds – 1E LXC
A	3	1. Sketching quadratics - 2F	1. Equation with gradient and one point - 5C, - 5D	
B	4	2. Discriminant - 2G 3. Modelling – 2H 4. Simultaneous linear equations by elimination & substitution - 3A	2. Parallel & perpendicular lines - 5E, 5F 3. Length and area - 5G 4. Modelling with straight lines - 5H	
A	5	1. Simultaneous equations by substitution, incl. one quadratic - 3B	1. Revision	1. Sketching cubics by factorising - 4A RJJ
B	6	2. Solving simultaneous equations graphically - 3C SET 3D VIDEO AND WORK FOR NEXT LESSON. 3. Quadratic inequalities - 3E SET 3F VIDEO AND WORK FOR NEXT LESSON 4. Slack time to recap	2. Test 1 Chapters 1, 2, 5 3. Review test SET 4A VIDEO AND WORK FOR NEXT LESSON 4. Sketching quartics - 4B sketching reciprocals - 4C	2. Linear inequalities - 3D MAP 3. Inequalities on graphs - 3F MAP
A	7	1. Regions of inequalities - 3G 2. Recap discriminant as an application of quadratic inequalities – Worksheet	1. Points of intersection - 4D SET 4E VIDEO AND WORK FOR NEXT LESSON 2. Stretching graphs - 4F	1. Translating graphs to include examples where translation is embedded in the question e.g. Qu 9 P74 - 4E RJJ

Half Term

Week		A	B	Home learning
B	8	1. Midpoints and perpendicular bisectors - 6A, 6B NB GWW has videos for all chapter 6 exercises 2. Equation of a circle - 6C	1. Transforming graphs - 4G 2. Mixed Exercises - 3 and 4 SET 7A VIDEO AND WORK FOR NEXT LESSON.	1. Algebraic fractions - 7A LXC
A	9	1. Intersections of lines and circles - 6D	1. Dividing polynomials POLYNOMIAL DIVISION and BOX METHOD - 7B	1. The cosine rule include discussion of largest angle opposite largest side - 9A TLW
B	10	2. Tangent and chord properties – 6E Circles and Triangles – 6F SET 9A VIDEO AND WORK FOR NEXT LESSON. 3. The sine rule - 9B, 9C SET 9D VIDEO AND WORK FOR NEXT LESSON 4. Triangle problems - 9E	2. The Factor theorem – 7C 3. Mathematical proof - 7D 4. Methods of proof - 7E	2. Areas of triangles - 9D TLW

A	11	1. Angles in all 4 quadrants - 10A	1. Revise	
B	12	SET 10B, 10C (Exact values using triangles Qs 6,7,8,9,11,12) VIDEO AND WORK FOR NEXT LESSON 2. Trig identities - 10C (Qs 1-5,10) 3. Simple trig equations - 10D 4. Harder trig equations - 10E	2. Test 2 Chapters 3, 4, 6, 7 3. Pascal's triangle - 8A Factorial notation - 8B 4. Binomial expansion - 8C	1. Exact trig ratios and exact values - 10B and 10C Qs 6,7,8,9,11,12 RJL
A	13	1. Equations and identities - 10F	1. Solving binomial problems - 8D	
B	14	2. Mixed Exercises 9 and 10/Revise 3. Test 3 Chapters 8, 9, 10	2. Binomial estimation - 8E 3. Revise	

Christmas

Week		A	B	Home learning
A	15	1. Introducing vectors - 11A	1. Differentiation from 1 st principles - 12B	1. Differentiating x^n - 12C SWT
B	16	2. Representing vectors - 11B 3. Magnitude and direction - 11C 4. Position vectors - 11D	SET 12C VIDEO AND WORK FOR NEXT LESSON 2. Differentiating quadratics - 12D SET 12E VIDEO AND WORK FOR NEXT LESSON 3. Gradients, tangents and normal - 12F 4. Increasing and decreasing functions - 12G 2 nd order differentials - 12H	2. Differentiating 2 or more terms - 12E SWT
A	17	1. Solving geometric problems - 11E	1. Stationary points - 12I	1. Exponential functions - 14A TLW
B	18	2. Modelling with vectors - 11F SET 14A VIDEO AND WORK FOR NEXT LESSON 3. $y = e^x$ - 14B Exponential modelling - 14C SET 14D VIDEO AND WORK FOR NEXT LESSON 4. Laws of logarithms - 14E	2. Sketching gradient functions - 12J 3. Modelling with differentiation - 12K 4. Max Box optimization problem	2. Logarithms - 14D SWT
A	19	1. Solving equations using logs - 14F	1. Integrating x^n - 13A	1. Indefinite integrals - 13B SWT
B	20	2. Natural logarithms - 14G 3. Logs and non-linear data - 14H 4. Mixed Exercise - 14	SET 13B VIDEO AND WORK FOR NEXT LESSON 2. Finding functions - 13C SET 13D VIDEO AND WORK FOR NEXT LESSON 3. Areas under curves - 13E 4. Areas under the x-axis - 13F	2. Definite integrals - 13D MAP

Half Term

Week		A	B	Home learning
A	21	Mechanics	1. Areas between curves and lines - 13G	
B	22		Start Year 2 2. Algebraic Fractions - 1B, 1C 3. Partial Fractions - 1D, 1E 4. Algebraic Division - 1F	

A	23	Mechanics	<ol style="list-style-type: none"> 1. Improper partial fractions – 1G 2. Radian Measure – 5A, 5B 3. Arc length – 5C 4. Sector area – 5D 	RJL/SWT HAVE DONE VIDEOS FOR CHAPTER 5 Suggest setting 5A and 5B as independent learning with videos.
B	24			
A	25	Mechanics	<ol style="list-style-type: none"> 1. Trig equations – 5E 2. Small angle approximations - 5F 3. Sec, cosec, cot – 6A, 6B 4. Using sec, cosec, cot – 6C 	MAP HAS SUMMARY SHEET for 6A, 6B
B	26			

Easter

Week		A	B	
A	27	Mechanics	<ol style="list-style-type: none"> 1. Trig identities – 6D 2. Inverse trig functions – 6E 3. Mixed Exc 6 4. Revision 	
B	28			
A	29	<ol style="list-style-type: none"> 1. Exam week 2. Exam week 3. Mechanics 4. Mechanics 	<ol style="list-style-type: none"> 1. Exam week 2. Exam week 3. Go over paper 4. Addition formula – 7A 	
B	30			
A	31	Mechanics	<ol style="list-style-type: none"> 1. Using addition formula – 7B 2. Double angle formula – 7C 3. Solving trig equations – 7D 4. Harmonic form $R\cos(x + a)$ etc. – 7E 	
B	32			

Half Term

Week		A	B	Home learning
A	33	Mechanics	<ol style="list-style-type: none"> 1. Proving trig identities – 7F 2. Modelling with trig identities – 7G 3. Mixed Exc 7 4. Differentiating sin and cos – 9A 	
B	34			
A	35	Mechanics	<ol style="list-style-type: none"> 1. Differentiating exponentials and logs – 9B 2. The chain rule – 9C 3. The product rule - 9D 4. The quotient rule – 9E 	TLW/RJL HAVE DONE SOME VIDEOS FOR CHAPTER 9
B	36			
A	37	Mechanics	<ol style="list-style-type: none"> 1. Differentiating trig functions – 9F 2. Parametric differentiation – 9G 	
	38	Project Week	Project Week	
B	39	Mechanics	<ol style="list-style-type: none"> 1. Implicit differentiation – 9H 	