Pure Maths Year 1/AS Revision Checklist

Topic	Unit	Sub-topic	☹	😟	☺	Revised
1. Algebraic expressions	1.1	Index laws				
	1.2	Expanding brackets				
	1.3	Factorising				
	1.4	Negative and fractional indices				
	1.5	Surds				
	1.6	Rationalising denominators				
2. Quadratics	2.1	Solving quadratic equations				
	2.2	Completing the square				
	2.3	Functions				
	2.4	Quadratic graphs				
	2.5	The discriminant				
	2.6	Modelling with quadratics				
3. Equations and inequalities	3.1	Linear simultaneous equations				
	3.2	Quadratic simultaneous equations				
	3.3	Simultaneous equations on graphs				
	3.4	Linear inequalities				
	3.5	Quadratic inequalities				
	3.6	Inequalities on graphs				
	3.7	Regions				
4. Graphs and transformations	4.1	Cubic graphs				
	4.2	Quartic graphs				
	4.3	Reciprocal graphs				
	4.4	Points of intersection				
	4.5	Translating graphs				
	4.6	Stretching graphs				
	4.7	Transforming functions				
5. Straight line graphs	5.1	$y = mx + c$				
	5.2	Equations of straight lines				
	5.3	Parallel and perpendicular lines				
	5.4	Length and area				
	5.5	Modelling with straight lines				
6. Circles	6.1	Midpoints and perpendicular bisectors				
	6.2	Equation of a circle				
	6.3	Intersections of straight lines and circles				
	6.4	Use tangent and chord properties				
	6.5	Circles and triangles				
7. Algebraic methods	7.1	Algebraic fractions				
	7.2	Dividing polynomials				
	7.3	The factor theorem				
	7.4	Mathematical proof				
	7.5	Methods of proof				
8. The binomial expansion	8.1	Pascal's triangle				
	8.2	Factorial notation				
	8.3	The binomial expansion				
	8.4	Solving binomial problems				
	8.5	Binomial estimation				

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9. Trigonometric ratios	9.1	The cosine rule				
	9.2	The sine rule				
	9.3	Areas of triangles				
	9.4	Solving triangle problems				
	9.5	Graphs of sine, cosine and tangent				
	9.6	Transforming trigonometric graphs				
10. Trigonometric identities and equations	10.1	Angles in all four quadrants				
	10.2	Exact values of trigonometric ratios				
	10.3	Trigonometric identities				
	10.4	Simple trigonometric equations				
	10.5	Harder trigonometric equations				
	10.6	Equations and identities				
11. Vectors	11.1.	Vectors				
	11.2	Representing vectors				
	11.3	Magnitude and direction				
	11.4	Position vectors				
	11.5	Solving geometric problems				
	11.6	Modelling with vectors				
12. Differentiation	12.1	Gradients of curves				
	12.2	Finding the derivative				
	12.3	Differentiating x^n				
	12.4	Differentiating quadratics				
	12.5	Differentiating functions with two or more terms				
	12.6	Gradients, tangents and normals				
	12.7	Increasing and decreasing functions				
	12.8	Second order derivatives				
	12.9	Stationary points				
	12.10	Sketching gradient functions				
	12.11	Modelling with differentiation				
13. Integration	13.1	Integrating x^n				
	13.2	Indefinite integrals				
	13.3	Finding functions				
	13.4	Definite integrals				
	13.5	Areas under curves				
	13.6	Areas under the x-axis				
	13.7	Areas between curves and lines				
14. Exponentials and logarithms	14.1	Exponential functions				
	14.2	$y = e^x$				
	14.3	Exponential modelling				
	14.4	Logarithms				
	14.5	Laws of logarithms				
	14.6	Solving equations using logarithms				
	14.7	Working with natural logarithms				
	14.8	Logarithms and non-linear data				