

Sandbach School Maths Department – Programme of Study (Year 1)

Date (w/b) 2022	Week	Teacher 1	Teacher 2
	Autumn term		
5 Sept	Week 1	P1.1 Index Laws P1.2 Expanding brackets P1.3 Factorising P1.4 Negative and fractional indices	P2.1 Solving quadratic equations P2.2 Completing the square P2.3 Functions
12 Sept	Week 2	P1.5 Surds P1.6 Rationalising denominators Mixed exercise	P2.4 Quadratic graphs P2.5 The Discriminant P2.6 Modelling with Quadratics mixed exercise
19 Sept	Week 3	P5.1 $y=mx+c$ P5.2 equations of straight lines P5.3 parallel and perpendicular lines	P3.1 Linear simultaneous equations P3.2 Quadratic simultaneous equations P3.3 simultaneous equation graphically
26 Sept	Week 4	P5.4 Length and area P5.5 Modelling with straight lines Mixed exercise	P3.4 Linear inequalities P3.5 Quadratic inequalities P3.6 Inequalities graphically & P3.7 Regions
3 Oct	Week 5	P6.1 midpoints and perpendicular bisectors P6.2 equation of a circle P6.3 intersections of straight lines and circles	Revision for PE1
10 Oct	Week 6	<b>PROGRESS EXAM 1 – 1 HOUR ALGEBRA, FEEDBACK AND WWW/EBI</b>	
17 Oct	Week 7	P6.4 Use tangent and chord properties P6.5 Circles and triangles Mixed exercise	P4.1 Cubic graphs P4.2 Quartic graphs P4.3 Reciprocal graphs P4.4 Points of intersection
24 <sup>th</sup> – 28 <sup>th</sup> Oct Half term			
31 Oct	Week 8	S2.1 Measures of central tendency S2.2 Other measures of location S2.3 Measures of spread S2.4 Variance and standard deviation S2.5 coding Mixed exercise	P4.5 Translating graphs P4.6 Stretching graphs P4.7 Transforming functions
7 <sup>th</sup> Nov	Week 9	S3.1 Outliers S3.2 Box plots S3.3 Cumulative frequency S3.4 Histograms S3.5 Comparing data Mixed exercise	P7.4 Mathematical proof P7.5 Methods of proof Mixed exercise
14 Nov	Week 10	S5.1 Calculating probabilities S5.2 Venn diagrams S5.3 Mutually exclusive & independent events S5.4 Tree diagrams Mixed exercise	P8.1 Pascal's triangle P8.2 Factorial notation P8.3 The binomial expansion
21 Nov	Week 11	P9.1 The cosine rule P9.2 the Sine rule P9.3 Areas of triangles P9.4 Solving triangle problems	P8.4 Solving binomial problems P8.5 Binomial estimation Mixed exercise
28 Nov	Week 12	P9.5 Graphs of sine, cosine and tangent	P12.1 Gradients of curves

		P9.6 Transforming trigonometric graphs Mixed exercise	P12.2 Finding the derivative P12.3 Differentiation xn
5 Dec	Week 13	Catch up/consolidation	P12.4 Differentiating quadratics P12.5 Differentiating functions with 2 or more terms
12 Dec	Week 14	Catch up/consolidation	Catch up/consolidation
<b>19-4 Jan Christmas break followed by Spring term</b>			
4 Jan	Week 15	P10.1 Angles in all four quadrants P10.2 Exact values of trigonometric ratios P10.3 Trig identities P10.4 Simple trig equations	P12.6 Gradients, tangents and normal P12.7 Increasing and decreasing functions P12.8 Second order derivatives
9 Jan	Week 16	P10.5 harder trig equations P10.6 Equations and identities Mixed exercise	P12.9 Stationary points P12.10 Sketching gradient functions P12.11 Modelling with differentiation Mixed exercise
16 Jan	Week 17	P11.1 Vectors P11.2 Representing vectors P11.3 Magnitude and direction P11.4 Position vectors	P13.1 Integrating xn P13.2 Indefinite integrals P13.3 Finding functions
23 Jan	Week 18	P11.5 Solving geometric problems P11.6 Modelling with vectors Mixed exercise	P13.4 Definite integrals P13.5 Areas under curves P13.6 Areas under the x-axis
30 Jan	Week 19	Revision for PE2	Revision for PE2
6 Feb	Week 20	<b>Progress Exam 2</b>	
13 Feb	Week 21	WWW/EBI	P13.7 Areas between curves and lines Mixed exercise
<b>20-24 Feb Half term</b>			
27 Feb	Week 23	S6.1 Probability distributions S6.2 The binomial distribution	M9.1 Displacement-time graphs M9.2 Velocity-time graphs M9.3 Constant acceleration formulae M9.4 Constant acceleration formulae
6 March	Week 24	S6.3 Cumulative probabilities Mixed exercise	M9.5 Vertical motion under gravity Mixed exercise M10.1 Force diagrams M10.2 Forces as vectors
13 March	Week 25	S7.1 Hypothesis testing S7.2 Finding critical values	M10.3 Forces and acceleration M10.4 Motion in 2 dimensions M10.5 Connected particles
27 March	Week 26	S7.3 One-tailed tests S7.4 Two-tailed tests Mixed exercise	M10.6 Pulleys Mixed exercise
<b>3 - 14 April Easter break followed by Summer term</b>			
17 April	Week 28	P14.1 Exponential functions P14.2 $y = ex$ P14.3 Exponential modelling	M11.1 Functions of time M11.2 Using differentiation M11.3 Maxima and minim problems
24 Apr	Week 29	P14.4 Logarithms P14.5 Laws of Logarithms P14.6 Solving equations using Logarithms	M11.4 Using Integration M11.5 Constant acceleration formulae Mixed exercise
1 May	Week 30	P14.7 Working with natural logarithm P14.8 Logarithms and non-linear data Mixed exercise	Revision on Mechanic
8 May	Week 31	S4.1 Correlation	Revision for progress exam

		S4.2 Linear regression Mixed exercise	
15 May	Week 32	Revision for progress exam	Revision for progress exam
22 May	Week 33	Revision for progress exam	Revision for progress exam
<b>29 – 2 June Half term – One 2nr AS exam</b>			
5 June	Week 35	<b>PROGRESS EXAM 3 – 2 hrs full AS paper</b>	
12 June	Week 36	P1.2 Algebraic fractions + and – P1.3 Algebraic fractions x and / P1.4 Partial fractions P1.5 Partial fractions repeated factor	P4.1 Binomial expansions P4.2 Binomial expansions $(a+x)^n$
19 June	Week 37	P1.1 Proof by contradiction Mixed exercise	P4.3 Binomial expansions and partial fractions Mixed exercise
26 June	Week 38	P2.1 The modulus function P2.2 Functions and mappings P2.3 Composite functions	P5.1 Radians P5.2 P5.3 Arc Length P5.4 Sector Area
3 July	Week 37	P2.4 Inverse functions P2.5 $y= f(x) $ and $y = f( x )$ P2.6 Combining transformations	P5.5 Solving trig equations P5.6 Small angle approximations Mixed exercise
10 Jul	Week 38	P2.7 Solving modulus problems Mixed exercise	Catch up/consolidation
17 July	Week 39	Work experience week – SUMMER WORK TO BE COMPLETED FOR YEAR 2	