GCSE Course Outline

4b	5a 5b	Learning objective	Elmw Bk 1-3	MW clip	R	A	G
a	Aut 1	**Unit 1: Sequences and equations**					
		LO1: To be able to recognise and continue a sequence	210	37			
		LO2: To be able to use the nth term rule	212	102, 103			
		LO3: To solve basic linear equations	69	100, 135a			
Unit 1 Assessment			**Fine Grade**				
	Aut 1	**Unit 2: Scales and Measure**					
		LO1: To be able to read scales	270	4			
		LO2: To be able to convert metric measures	273	112			
		LO3: To be able to use time in calculations	276	6a			
		LO4: To be able to solve problems involving speed, distance, time	278	142			
Unit 2 Assessment			**Fine Grade**				
Aut 1	Aut 1/2	**Unit 3: Perimeter, area and volume**					
		LO1: To be able to calculate the perimeter 2D shapes	281	52			
		LO2: To be able to calculate the area of triangles and rectangles	283	53, 54			
		LO3: To be able to calculate area of parallelograms and trapezia	286	55, 56			
		LO4: To be able to calculate surface area and volume of cuboid	296	114a, 115			
		LO5: To be able to calculate surface area and volume of a prism	298	114b, 119			
Unit 3 Assessment			**Fine Grade**				
n/a	Aut 2	**Unit 4: Averages and range**					
		LO1: To be able to calculate averages and range from frequency tables	337	130a			
		LO2: To be able to compare sets of data	335, 344				
Unit 4 Assessment			**Fine Grade**				
n/a	Autumn 2	**Unit 5: Percentages**					
		LO1: To be able to convert between fractions and percentages	168	85			
		LO2: To be able to calculate percentages without a calculator	173	87			
		LO3: To be able to calculate with percentages using a calculator including simple interest	175 - 178, 182	86			
		LO4: To be able to calculate reverse percentages	179	110			
		LO5: To be able to convert between fractions, decimals and %	181	85			
Unit 5 Assessment			**Fine Grade**				
n/a	Spr 1	**Unit 6: Ratio and proportion**					
		LO1: To be able to use ratio notation and simplify	185	38			
		LO2: To be able to share into a given ratio	190	106			
		LO3: To be able to use direct proportion to solve problems	188	42, 39			
Unit 6 Assessment			**Fine Grade**				
n/a	Spr 1	**Unit 7: Coordinates and graphs**					
		LO1: To be able to plot and read coordinates in all four quadrants	127	8, 113			
		LO2: To be able to plot and identify straight line graphs	218	96			
		LO3: To understand gradient and lines in the form $y = mx + c$	222	159a, 159b			
		LO4: To be able to change the subject of a simple formula	217	136			
		LO5: To be able to read and interpret graphs incl travel graphs	229	143			
Unit 7 Assessment			**Fine Grade**				

GCSE Course Outline

4b	5a 5b	Learning objective	Elmw Bk 4-5	MW clip	R	A	G
Aut 1	Spr2	**Unit 8: Extended number skills**					
		LO1: To be able to calculate with roots	9	81			
		LO2: To use prime factor decomposition to find HCF and LCM	11	78/79/80			
Unit 8 Assessment			**Fine Grade**				
Autumn 1	Spring 2	**Unit 28: Trigonometry and Pythagoras**					
		LO1: To be able to use SOH, CAH, TOA to find lengths in right angled triangles	315	168			
		LO2: To be able to use SOH, CAH, TOA to find angles in right angled triangles	319	168			
		LO3: To know common trigonometric values	321	173			
		LO4: To be able to use Pythagoras' Theorem to solve problems	310	150			
Unit 28 Assessment			**Fine Grade**				
Aut 1	Spring 2	**Unit 9: Formulae, equations and inequalities**					
		LO1: To be able to write and use formulae	31, 33	137/95			
		LO2: To be able to change the subject of simple formulae	Bk 1-3 217	136			
		LO3: To be able to expand 2 brackets	36	134			
		LO4: To be able to solve equations with brackets	40	135			
		LO5: To be able to write and solve inequalities	170	138/139			
Unit 9 Assessment			**Fine Grade**				
Aut 2	Sum 1	**Unit 10: Fractions**					
		LO1: To be able to divide fractions to give a decimal	64				
		LO2: To be able to calculate using mixed numbers	66	71/73/74			
Topi 10 Assessment			**Fine Grade**				
Autumn 2	Summer 1	**Unit 11: Transformations (intro pages 131 - 139 Elmwood 1-3 book)**					
		LO1: Reflections - to describe and reflect shapes given equation of line	88	48			
		LO2: Rotations - to describe and rotate shapes	91	49			
		LO3: Enlargements - to describe enlargements and enlarge shapes	95	148			
		LO4: Translations - to describe translations and translate shapes	Bk 1-3 131	60			
		LO5: Mixed Transformations	97				
		LO6: To recognise congruence	Bk 1-3 P124				
Unit 11 Assessment			**Fine Grade**				
Aut 2	Sum 2	**Unit 12: Area and volume**	**Book 1-3**				
		LO1: To be able to calculate the circumference of a circle	289	118			
		LO2: To be able to calculate the area of a circle	293	117			
		LO3: To be able to calculate the volume of a cylinder	300	119			
		LO4: To be able to identify similar shapes	303	144			
Unit 12 Assessment			**Fine Grade**				
Aut 2		**Unit 13: Percentages and decimals**					
		LO1: To divide by decimals	121	67			
		LO2: To be able to calculate percentage change	124	109			
		LO3: To be able to use a % multiplier	127	110/164			
Unit 13 Assessment			**Fine Grade**				

GCSE Course Outline

Spr 1	**Sum 2**	**Unit 14: Probability**	**Book 1-3**				
		LO1: To be able to use relative frequency (experimental probability)	243-	125			
		LO2: To be able to list outcomes and use frequency trees	250 -	58/57			
		LO3: To be able to identify and use mutually exclusive events	246 255	59/60			
		LO4: To be able to draw and use Venn diagrams	259	127/185			
Unit 14 Assessment			**Fine Grade**				

Spr 1	**Aut 1**	**Unit 15: Maps and bearings**	**Book 1 - 3**				
		LO1: To be able to read map scales	368	38			
		LO2: To be able to produce scale drawings	361	124			
		LO3: To be able to read and draw bearings	370	124			
Unit 15 Assessment			**Fine Grade**				

Spr 1	**Aut 1**	**Unit 16: Constructions and 3D representations**	**Book 1 - 3**				
		LO1: To be able to construct triangles	358	147			
		LO2: To be able to represent 3D solids in 2D including nets	362	44			
		LO3: To be able to use and interpret plans and elevations	Bk 4-5 308	51			
Unit 16 Assessment			**Fine Grade**				

Items in yellow for set 4b only

4b	**5a 5b**	**Learning objective**	**Elm Bk 4-5**	**MW clip**	**R**	**A**	**G**

Spr 2	**Aut 2**	**Unit 17: Statistics**					
		LO1: To be able to draw and interpret time series graphs	277	153			
		LO2: To be able to plot and interpret scatter graphs including line of best fit	280	129			
		LO3: To understand the different methods of sampling	284	152/176			
Unit 17 Assessment			**Fine Grade**				

Sp 2	**Aut 2**	**Unit 18: Powers and standard form**					
		LO1: To be able to calculate with powers including negative powers	6	154			
		LO2: To be able to calculate using standard form (Intro bk 1-3 pg 35)	13-18	83			
Unit 18 Assessment			**Fine Grade**				

Spr 2	**Spr 1**	**Unit 19: Equations**					
		LO1: To be able to form equations	46	137			
		LO2: To be able to solve harder linear equations	43, 50	135			
		LO3: To be able to factorise quadratics	50	157			
Unit 19 Assessment			**Fine Grade**				

Sum 1		**Unit 20: Angles**					
		LO1: To be able to use angle properties in proof	80	122			
		LO2: To understand and be able to prove congruence	84	166			
Unit 20 Assessment			**Fine Grade**				

Sum 1	**Spr 1**	**Unit 21: Vectors**					
		LO1: To be able to draw and describe vectors	99-101	174			
		LO2: To be able to add and subtract vectors	102-104	174			
		LO3: To be able to use combinations of vectors to describe pathways	104-106	174			
Unit 21 Assessment			**Fine Grade**				

GCSE Course Outline

4 b	5a 5b	Learning objective	Elm Bk 4-5	MW clip	R	A	G
Sum 1	Spr 1	**Unit 22: Percentages**					
		LO1: To be able to calculate reverse percentages	127-129	110			
		LO2: To be able to calculate compound interest	130-134	164			
Unit 22 Assessment			**Fine Grade**				
Sum 2	Spr 1	**Unit 23: Ratio and Proportion**					
		LO1: To be able to share into a given ratio with three or more parts	135	106			
		LO2: To be able to recognise and solve problems using direct prop'n	137	199			
		LO3: To be able to recognise and solve problems using inverse prop'n	141	199			
Unit 23 Assessment			**Fine Grade**				
Sum 2	Spr 2	**Unit 24: Sequences**					
		LO1: To be able to derive the nth term of a linear sequence	160	102/103			
		LO2: To be able to recognise quadratic and Fibonacci sequences	162	104/141			
		LO3: To be able to recognise and derive geometric sequences	163	163			
Unit 24 Assessment			**Fine Grade**				
Autumn 1		**Unit 25: Formulae, quadratic and simultaneous equations**					
		LO1: To be able to change the subject of more complex formulae	165	136			
		LO2: To be able to solve quadratic equations by factorising and finding roots	173	157			
		LO3: To be able to solve simultaneous equations algebraically	179	162			
		LO4: To be able to solve simultaneous equations graphically	177	140			
		LO5: To be able to set up simultaneous equations	181				
Unit 25 Assessment			**Fine Grade**				
Aut 2		**Unit 26: Graphs**					
		LO1: To be able to form the equation $y = mx + c$	190	159			
		LO2: To be able to plot and interpret curved graphs (intro 1-3 pg 227)	183	98			
		LO3: To understand and identify rate of change in context	187				
Unit 26 Assessment			**Fine Grade**				
Spring 1		**Unit 27: Perimeter, surface area, area and volume**					
		LO1: To be able to convert between units of length, area and volume	250				
		LO2: To be able to calculate arc lengths and sectors	245				
		LO3: To be able to calculate volumes of spheres, pyramids and cones	252	169,171			
		LO4: To be able to calculate surface area of cylinders, spheres and cones	254	169,171			
		LO5: To be able to solve problems involving similar shapes	257	144			
Unit 27 Assessment			**Fine Grade**				
Spr 1	Spr 2	**Unit 29: Probability**					
		LO1: To be able to use venn diagrams and set notation	206	127			
		LO2: To be able to use probability trees – independent events	215	151			
		LO3: To be able to use probability trees – dependent events	219	175			
Unit 29 Assessment			**Fine Grade**				

GCSE Course Outline

Spr2	**Spr2**	**Unit30 : Bounds and compound measures**					
		LO1: To be able to identify upper and lower bounds	236	132			
		LO2: To be able to truncate and identify bounds from truncated numbers	239				
		LO3: To be able to use compound measures	241	142			
Unit 30 Assessment			**Fine Grade**				

Spr2	**Spr2**	**Unit 31: Constructions and Loci**					
		LO1: To be able to construct an angle bisector	299	146			
		LO2: To be able to construct a perpendicular bisector	299	146			
		LO3: To be able to construct angles accurately using a ruler and compasses	301	147			
		LO4: To be able to construct a locus of points to fit a given rule	303	165			
Unit 31 Assessment			**Fine Grade**				