## MATHEMATICS: Core 2 (C2)

PERSONALISED CHECKLIST

		Page*			
			R	Α	
	Algebra and functions	1			
1.1	Simplifying algebraic fractions by division	2			
1.2	Dividing a polynomial by $(x \pm p)$	6			
	Factorising a polynomial using the factor theorem	11			
1.4	Using the remainder theorem	14			
2.0	The sine and cosine rule	18			
	Using the sine rule to find missing sides	19			
	Using the sine rule to find unknown angles	22			
	The rule and finding two solutions for a missing angle	24			
	Using the cosine rule to find an unknown side	25			
	Using the cosine rule to find a missing angle	28			
	Using the sine rule, the cosine rule and Pythagoras' Theorem	31			
	Calculating the area of a triangle using sine	33			
2.0		29	<b></b>		_
	Exponentials and logarithms	38			-
	The function $y = a^x$	39			_
	Writing expressions as a logarithun	41			
	Calculating using logarithms to base 10	42			
	Laws of logarithms	43			
	Solving equations of the form of $a^x = b$	45			
3.6	Changing the base of logarithms	47			
4.0	<b>Coordinate geometry in the</b> ( <i>x</i> , <i>y</i> ) plane	51			
	The mid-point of a line	52			
4.2	The distance between two points on a line	60			
4.3	The equation of a drcle	63			
5.0	The binomial expansion	76	<b>[</b>		_
	Pascal's triangle	77			
	Combinations and factorial notation	79			
	Using $(nCr)$ in the binomial expansion	80			
	Expanding $(a + bx)^n$ using the binomial expansion	82			
					1
	Radian measure and its applications	87			
	Using radians to measure angles	88			
	The length of the arc of a circle The area of a sector of a circle	<u> </u>			
	The area of a segment of a circle	93			
			-		<u> </u>
	Geometric sequences and series	102			
	Geometric sequences	103			-
	Geometric progressions and the nth term	104			$\vdash$
	Using geometric sequences to solve problems	107			$\vdash$
	The sum of a geometric series	109			-
7.5	The sum to infinity of a geometric series	112			
	Graphs of trigonometric functions	119			
8.1	Sine, cosine and tangent functions	120			
8.2	The values of trigonometric functions in the four quadrants	124			
	Exact values and surds for trigonometrical functions	127			
	Graphs of sine $\theta$ , $\cos \theta$ and $\tan \theta$ .	128			
0 5	Simple transformations of sine $\theta$ , $\cos \theta$ and $\tan \theta$ .	131			1

## MATHEMATICS: Core 2 (C2)

PERSONALISED CHECKLIST

	Page*			
		R	Α	G
9.0 Differentiation	141			
9.1 Increasing and decreasing functions	142			
9.2 Stationary points, maximum, minimum and points of inflexion	144			
9.3 Using turning points to solve problems	148			

10.0 Trigonometrical identities and simple equations	154		
10.1 Simple trigonometrical identities	155		
10.2 Solving simple trigonometrical equations	160		
10.3 Solving equations of the form $sin(n\theta + a)$ , $cos(n\theta + a)$ and $tan(n\theta + a) = k$	163		
10.4 Solving quadratic trigonometrical equations	165		

11.0 Integration	171		
11.1 Simple definite integration	172		
11.2 Area under a curve	174		
11.3 Area under a curve that gives negative values	176		
11.4 Area between a straight line and a curve	179		
11.5 The trapezium rule	184		