Unit 3 – Circular Functions and Trigonometry

Lesson	Lab or Activity	AV presentation / Class notes	IB Standards	Follow-up	Homework	Assessment
1		3:1 The Circle	3.1 The circle: radian measure of angles; lengths of an arc; area of a sector.		TW3:1	
2, 3, 4		3:2 Primary Trigonometric Ratios	3.2.1 Definition of cosθ and sinθ in terms of the unit circle. 3.5.1 Solution of trigonometric equations in a finite interval.	TW3:2		Quiz 1
5, 6		3:3 Trigonometric Identities	3.2.2 Definition of tanθ as $\frac{\sin\theta}{\cos\theta}$. 3.2.3 The identity $\cos^2\theta + \sin^2\theta = 1$	TW3:3		
7		3.4 Double Angle Formulae	3.3 Double angle formulae: sin2θ=2sinθcosθ; cos2θ=cos2θ - sin2θ.	TW3:4		
8, 9, 10		3:4 Trigonometric Functions	3.4.1 The circular functions sinx, cosx and tanx: the domains and ranges; their periodic nature; and their graphs. 3.4.2 Composite functions of the form f(x) = asin(b(x+c))+d.	TW3:5		

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11, 12		3:5 Solving Trigonometric Functions	3.5.1 Solution of trigonometric equations in a finite interval. 3.5.2 Equations of the type asin (b(x+c)) = k. 3.5.3Equations leading to quadratic equations in, for example, sinx. 3.5.4 Graphical interpretation of the above.	TW3:6		Quiz 2
13, 14		3:6 Modeling with Trigonometric Functions		TW3:7	Assign portfolio assignment Sunrise Over New York	
15		3:7 Solving Triangles – Law of Cosines	3.6.1 Solution of triangles. 3.6.2 The cosine rule: $c^2 = a^2 + b^2 - 2ab\cos C$. 3.6.4 Area of a triangle as $\frac{1}{2}ab\sin C$.	TW3:8		
16, 17		3:8 Solving Triangles – Law of Sines	3.6.3 The sine rule: $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$.	TW3:9		
18						Unit 3 Test 1