MCT 4CI **Learning Goals Unit 3 – Sinusoidal Functions**

- **to be able to graph y = asin[k(x – p)] +q and y = acos[k(x – p)] +q**
- **state the sinusoidal function's equation given the graph**
- **be able to do several types of sinusoidal application questions**
- **use basic trigonometric identities to prove complex identities**

Knowledge & Skills	I have reviewed it	I have done questions	I think I've got this
Graphing Sinusoidal Functions			
(i) Graph y = asin[k(x – p)] +q, Amplitude = a Period = $\frac{360°}{k}$ graphed at (p, q)			
(ii) Graph y = acos[k(x – p)] +q (**starts at a maximum**)			
State the properties of (i) and (ii): amplitude, period, max, min, domain, range, and translations using the equation only			
State an equation given the graph			
Applications Of Sinusoidal Functions			
Sketch the application given the equation Ex. $d = 1.8\sin\left[\frac{360°}{12.2}(t - 2.5)\right] + 3.1$			
Sketch the application given information			
State the equation given information			
Use the sketch to identify when maximums, minimums, and means occur			
Use the equation to deteremine ***d*** =			
Use the equation to determine ***t*** when d = 4 for example			
"Tide" Questions			
"Ferris Wheel Questions"			
"Tsunami Questions"			
"Above and below the t–axis Questions"			
"Other" Questions			
Trigonometric Identities			
Reciprocal Identities (2 that we use)			
Quotient Identities (2)			
Pythagorean Identities (3)			
Types involving:			
(i) Reducing, expanding, factoring			
(ii) Adding / Subtracting fractions			
(iii) Multi–layered fractions - Mr. One!			
Or a combination of the above (i) – (iii)			