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| **Year 2 pure unit 6: Trigonometric functions** | **Road Map** |
| In this unit you will learn about pure maths. The aims are as follows:**LG1**: Knowledge**LG2**: Application**LG3**: Skills | Assessment Grades |  |  |
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| **Themes** | **Learning Goals/Outcomes/Content** |  |  |  |
| **6a. Secant, cosecant and cotangent (definitions, identities and graphs) & inverse trigonometrical functions** | understand the secant, cosecant and cotangent functions, and their relationships to sine, cosine and tangent; |  |  |  |
| be able to sketch the graphs of secant, cosecant and cotangent; |  |  |  |
| be able to simplify expressions and solve involving sec, cosec and cot; |  |  |  |
| be able to solve identities involving sec, cosec and cot; |  |  |  |
| know and be able to use the identities 1 + tan2*x* = sec2*x* and 1 + cot2 *x* = cosec2*x* to prove other identities and solve equations in degrees and/or radians |  |  |  |
| be able to work with the inverse trig functions sin–1, cos–1 and tan–1; |  |  |  |
| be able to sketch the graphs of sin–1, cos–1 and tan–1. |  |  |  |

**Links:**

LG1: You will learn how to use secant, cosecant, cotangent, arcsin, arccos and arctan functions. You will learn their relationships to sine, cosine and tangent, understand their graphs and know their ranges and domains. You will learn how to use additional trigonometric identities.

LG2: You will be able to apply your knowledge of trigonometric functions and identities to solve equations, sketch graphs and construct proofs.

LG3: You will be able to solve a variety of routine and non-routine problems, by combining several Mathematical skill sets. For example, by combining your knowledge of functions, graphs and trigonometric functions to deduce domains and ranges for inverse trig functions.