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| **Year 2 pure unit 7: Trigonometry and modelling** | **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** | | |  |  |  |
| **7a. Compound angle formulae** | be able to use compound angle identities to rearrange expressions; | | |  |  |  |
| be able to use compound angle identities to rearrange equations into a different form and then solve. | | |  |  |  |
| **7b. Double angle formulae and solving trigonometric equations** | be able to prove geometrically the following compound angle formulae for sin (*A ± B*), cos (*A ± B*) and tan (*A ± B*); | | |  |  |  |
| be able to use compound angle identities to prove other identities; | | |  |  |  |
| be able to recall or work out double angle identities; | | |  |  |  |
| be able to use double angle identities to rearrange expressions or prove other identities; | | |  |  |  |
| be able to use double angle identities to rearrange equations into a different form and then solve. | | |  |  |  |
| **7c. Simplifying acosx ± bsinx using** ***R* cos (*x* ± *α*) or *R* sin (*x* ± *α*)** | be able to express as a single sine or cosine function; | | |  |  |  |
| be able to solve equations of the form in a given interval. | | |  |  |  |
| **7d. Proving trigonometric identities** | be able to construct proofs involving trigonometric functions and previously learnt identities. | | |  |  |  |
| **7e. Modelling and solving problems in context** | be able to use trigonometric functions to solve problems in context, including problems involving vectors, kinematics and forces. | | |  |  |  |

**Links:**

LG1: You will learn how to use double angle formulae and compound angle formulae. You will understand proofs of these formulae. You will learn how to use expressions for

a cos θ + b  sin θ in the equivalent forms of R cos (θ ± α) or R sin (θ ± α)

LG2: You will be able to apply your knowledge of trigonometric functions and identities to construct proofs.

LG3: You will be able to use trigonometric functions to solve problems in context, including problems involving vectors, kinematics and forces.