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| **Year 2 pure unit 5: Radians** | **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** |  |  |  |
| **5a. Radians (definition and exact values)** | understand the definition of a radian and be able to convert between radians and degrees; |  |  |  |
| know and be able to use exact values of sin, cos and tan. |  |  |  |
| **5b. Arcs and sectors** | be able to derive and use the formulae for arc length and area of sector. |  |  |  |
| **5c. Solving trigonometric equations** | be able to solve trigonometric equations within a given interval using radian limits |  |  |  |
| understand and be able to use $\tan(θ)=\frac{\cos(θ)}{\sin(θ)}$ |  |  |  |
| Understand and use sin2 *θ* + cos2 *θ* = 1 |  |  |  |
| **5d. Small angles** | understand and be able to use the standard small angle approximations for sine, cosine and tangent. |  |  |  |

**Links:**

LG1: You will learn how to work with radian measure including use for arc length and sector area. You will learn how to use the standard small angle approximations for sine, cosine and tangent. You will learn and use exact values of sin, cos and tan and multiples thereof.

LG2: You will be able to apply your knowledge of radian measure to find solutions to problems modelled using graphs of trig functions.

LG3: You will be able to solve a variety of routine and non-routine problems, by combining several Mathematical skill sets. For example, solving quadratic trigonometric equations requiring the use of trig identities where some solutions are valid and others are not.