

Year 13 Mathematics - Pure

Learning Programme 1

The LORIC skill focus for his LP is: LEADERSHIP The Moral Virtues focus for this LP are: COURAGE and HUMILITY. Courage - Acting with bravery and overcoming fears. Humility - Having a modest view of oneself.			Literacy: • Capital letters must be used at the start of sentences and for the first letter of proper nouns • Full stops must be used at the end of a sentence • Question marks must be used at the end of a question • Apostrophes should only be used for possession or omission • Days of the week and months must be spelled correctly • Key words must be spelled correctly
What will I be learning about in this Learning Programme? In LP1 I will be learning about sequences and series, radians, arc length, area of sectors and segments, trigonometric equations, trigonometric functions, trigonometric identities.			
Where have I seen this learning before? GCSE: sequences, arc length and area of sectors in degrees, sketch and interpret Sine, Cosine and Tangent graphs, solve simple trigonometric equations using identities			
What could I use it for? The knowledge and skills I will learn in this learning programme will allow me to calculate in radians and solve equations using trigonometric identities. These skills are used by engineers and scientists who work with electricity.			
In LP1.1, I will know:	31/08/26 - (WK 1)	Frayer Model Words	Homework
how to find the n th term of arithmetic sequences; prove and use the formula for the sum of n terms in an arithmetic series; how to find the n th term of geometric sequences.		Sequence	Arithmetic Sequence Worksheet
In LP1.2, I will know:	07/09/26 - (WK 2)	Frayer Model Words	Homework
how to prove and use the formula for the sum to infinity of a geometric series; how to use sigma notation to describe series; how to generate sequences from recurrence relations.		Geometric	Geometric Sequences Worksheet
In LP1.3, I will know:	14/09/26 - (WK 1)	Frayer Model Words	Homework
how to convert between degrees and radians the exact values of angles measured in radians; how to find an arc length using radians.		Radian	Radians Worksheet
Extended Task.			
In LP1.4, I will know:	21/09/26 - (WK 2)	Frayer Model Words	Homework
how to apply formulae to find areas of sectors and segments using radians; how to solve trigonometric equations in radians.		Segment	Trigonometric Functions Worksheet
In LP1.5, I will know:	28/09/26 - (WK 1)	Frayer Model Words	Homework
how to find values using the secant, cosecant and cotangent functions; how to interpret the graphs of the trigonometric functions stating their domain and range.		Domain	Trigonometric Functions Worksheet
Extended Task.			
In LP1.6, I will know:	05/10/26 - (WK 2)	Frayer Model Words	Homework
how to simplify expressions and solve equations involving the reciprocal trigonometric functions; how to derive identities involving the reciprocal trigonometric functions.		Reciprocal	Reciprocal Functions Worksheet
Extended Task.			
In LP1.7, I will know:	12/10/26 - (WK 1)	Frayer Model Words	Homework
how to use the inverse trigonometric functions.		Inverse	Inverse Functions Worksheet
Resources to support learning: Use your knowledge organisers to support with revision and recall. Here are some online resources to further support you in your Mathematics revision beyond the classroom. All weekly homework tasks are based on the exercises from the book. In addition to homework, Pupils should use questions not used in class plus the review exercises to help support learning from outside the classroom. Online Resource for homework and exam practice: https://www.drfrostmaths.com/ . Topic based exam questions - https://www.mathsgenie.co.uk/			
FEET Award Challenge for this Learning Programme: Create a worded problem that would lead to a geometric sequence or series. Show how to form the sequence and how to find the sum of n terms and the sum to infinity.			

