



HALF TERM 3 Jan-Feb	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
TOPIC (S):-Pure :-Statistics :-Mechanics	Trigonometry Hypothesis Testing 1	Trigonometry Hypothesis Testing 1	Trigonometry Hypothesis Testing 1	Trigonometry Hypothesis Testing 1	Trigonometry Hypothesis Testing 1	Trigonometry Hypothesis Testing 1	Revision and Test for all modules.
Knowledge & Skills development	Pure Statistics	<p>Trigonometry: Understand and use the definitions of sine, cosine and tangent for all arguments; the sine and cosine rules; the area of a triangle in the form $\frac{1}{2} ab \sin C$. Work with radian measure, including use for arc length and area of sector. Understand and use the standard small angle approximations of sine, cosine and tangent when differentiating sine or cosine from first principles. Use standard small angle approximations to deduce approximations for other functions. Understand and use vertical asymptotes of a tangent graph. Carry out simple transformations of the graphs of the sine, cosine and tangent functions.</p> <p>use $\tan \theta \equiv \frac{\sin \theta}{\cos \theta}$ to solve equations or find exact values.</p> <p>use $\sin^2 \theta + \cos^2 \theta \equiv 1$ to solve equations or find exact values.</p> <p>Understand and solve simple trigonometric equations. To answer questions that require them to give solutions in degrees.</p> <p>Hypothesis Testing 1: Recognise whether a given context requires the use of a 1-tail or 2-tail test and understand the difference between them, be able to state appropriate null and alternative hypotheses to test a population proportion in a given context and know that the null hypothesis always contains the equality sign. Understand that the significance level of a test is the probability of rejecting a correct null hypothesis in error Be able to find the test statistic as being the observed number of outcomes of the event and be able to find the critical region for a 1-tail test, or the critical regions for a 2-tail test, supporting the choice of values in such regions with appropriate binomial probabilities. Know that the critical region consists of the critical values for the test and that if the test statistic lies in the critical region that this will lead to the rejection of the null hypothesis At AS students are required to become familiar with one or more specific large data set(s) in advance of the final assessment (these data must be real and sufficiently rich to enable the concepts and skills of data presentation and interpretation in the specification to be explored). Use technology such as spreadsheets or specialist statistical packages to explore the data set(s). Interpret real data presented in summary or graphical form and use data to investigate questions arising in real contexts. Pupils are encouraged to use statistical data sets and statistical packages throughout the course of study of statistics. Know that the acceptance region is the range of possible values, that the discrete random variable can take, that do</p>					

	Mechanics	not lie in the critical region and that if the test statistic lies in the acceptance region that this will lead to the acceptance of the null hypothesis, appreciate that if the test statistic corresponds to a critical value in the critical region that the null hypothesis is rejected, or that if the test statistic is in the acceptance region then the null hypothesis is accepted.					
Assessment / Feedback Opportunities		Topic assessments	Self-assessment sheets	Homework	Formative teacher assessment - verbal	Retrieval practice	
Cultural Capital		<ul style="list-style-type: none"> • Tolerance and respect for peers and mathematicians • Democracy: allowing all to speak and voice views 					
SMSC / Promoting British Values (Democracy, Liberty, Rule of Law, Tolerance & Respect)		Willingness to participate in, and respond to mathematical opportunities. Use of social skills in different contexts, including working and socialising with pupils from different religious, ethnic and socio-economic backgrounds.					
Reading opportunities		<ul style="list-style-type: none"> • Fermat's Last Theorem, History of computer programming, Newton's Laws of Motion. 					
Key Vocabulary		Trigonometry, Hypothesis.					
Digital Literacy		Autograph, Desmos for graphing. Geogebra.					
Careers		Architect, Sports science, Engineer, Statistician, Business- manager, Market research. Computer Programmer, Video game development.					