

TERM	UNIT / LESSON	OBJECTIVES
<b>AUTUMN</b>	<b>16 Circle theorems</b>	
	16.1 Radii and chords	Solve problems involving angles, triangles and circles.
		Understand and use facts about chords and their distance from the centre of a circle.
		Solve problems involving chords and radii.
	16.2 Tangents	Understand and use facts about tangents at a point and from a point.
		Give reasons for angle and length calculations involving tangents.
	16.3 Angles in circles 1	Understand, prove and use facts about angles subtended at the centre and the circumference of circles.
		Understand, prove and use facts about the angle in a semicircle being a right angle.
		Find missing angles using these theorems and give reasons for answers.
	16.4 Angles in circles 2	Understand, prove and use facts about angles subtended at the circumference of a circle.
		Understand, prove and use facts about cyclic quadrilaterals.
		Prove the alternate segment theorem.
	16.5 Applying circle theorems	Solve angle problems using circle theorems.
		Give reasons for angle sizes using mathematical language.
		Find the equation of the tangent to a circle at a given point.
<b>AUTUMN</b>	<b>17 More algebra</b>	
	17.1 Rearranging formulae	Change the subject of a formula where the power of the subject appears.
		Change the subject of a formula where the subject appears twice.
	17.2 Algebraic fractions	Add and subtract algebraic fractions.
		Multiply and divide algebraic fractions.
		Change the subject of a formula involving fractions where all the variables are in the denominators.
	17.3 Simplifying algebraic fractions	Simplify algebraic fractions.
	17.4 More algebraic fractions	Add and subtract more complex algebraic fractions.
		Multiply and divide more complex algebraic fractions.
	17.5 Surds	Simplify expressions involving surds.
		Expand expressions involving surds.
		Rationalise the denominator of a fraction.
	17.6 Solving algebraic fraction equations	Solve equations that involve algebraic fractions.
	17.7 Functions	Use function notation.
		Find composite functions.
		Find inverse functions.
	17.8 Proof	Prove a result using algebra.
<b>AUTUMN</b>	<b>18 Vectors and geometric proof</b>	
	18.1 Vectors and vector notation	Understand and use vector notation.
		Work out the magnitude of a vector.

	18.2 Vector arithmetic	Calculate using vectors and represent the solutions graphically.
		Calculate the resultant of two vectors.
	18.3 More vector arithmetic	Solve problems using vectors.
		Use the resultant of two vectors to solve vector problems.
	18.4 Parallel vectors and collinear points	Express points as position vectors.
		Prove lines are parallel.
		Prove points are collinear.
	18.5 Solving geometric problems	Solve geometric problems in two dimensions using vector methods.
		Apply vector methods for simple geometric proofs.
<b>AUTUMN</b>	<b>19 Proportion and graphs</b>	
	19.1 Direct proportion	Write and use equations to solve problems involving direct proportion.
	19.2 More direct proportion	Write and use equations to solve problems involving direct proportion.
		Solve problems involving square and cubic proportionality.
	19.3 Inverse proportion	Write and use equations to solve problems involving inverse proportion.
		Use and recognise graphs showing inverse proportion.
	19.4 Exponential functions	Recognise graphs of exponential functions.
		Sketch graphs of exponential functions.
	19.5 Non-linear graphs	Calculate the gradient of a tangent at a point.
		Estimate the area under a non-linear graph.
	19.6 Translating graphs of functions	Understand the relationship between translating a graph and the change in its function notation.
	19.7 Reflecting and stretching graphs of functions	Understand the effect stretching a curve parallel to one of the axes has on its function form.
		Understand the effect reflecting a curve in one of the axes has on its function form.
<b>END OF TERM 4 TEST</b>		
<b>Revision</b>		