

TERM	UNIT / LESSON	OBJECTIVES
AUTUMN	16 Quadratic equations and graphs	
	16.1 Expanding double brackets	Multiply double brackets. Recognise quadratic expressions. Square single brackets.
	16.2 Plotting quadratic graphs	Plot graphs of quadratic functions. Recognise a quadratic function. Use quadratic graphs to solve problems.
	16.3 Using quadratic graphs	Solve quadratic equations $ax^2 + bx + c = 0$ using a graph. Solve quadratic equations $ax^2 + bx + c = k$ Using a graph.
	16.4 Factorising quadratic expressions	
	16.5 Solving quadratic equations algebraically	
AUTUMN	17 Perimeter, area and volume 2	
	17.1 Circumference of a circle 1	Calculate the circumference of a circle. Solve problems involving the circumference of a circle.
	17.2 Circumference of a circle 2	Calculate the circumference and radius of a circle. Work out percentage error intervals.
	17.3 Area of a circle	Work out the area of a circle. Work out the radius or diameter of a circle. Solve problems involving the area of a circle. Give answers in terms of π .
	17.4 Semicircles and sectors	Understand and use maths language for circles and perimeters. Work out areas of semicircles and quarter circle and perimeters. Solve problems involving sectors of circles.
	17.5 Composite 2D shapes and cylinders	Solve problems involving areas and perimeters of 2D shapes. Work out the volume and surface area of cylinders.
	17.6 Pyramids and cones	Work out the volume of a pyramid. Work out the surface area of a pyramid. Work out the volume of a cone. Work out the surface area of a cone.
	17.7 Spheres and composite solids	Work out the volume of a sphere. Work out the surface area of a sphere. Work out the volume and surface area of composite solids.
AUTUMN	18 Fractions, indices and standard form	
	18.1 Multiplying and dividing fractions	Multiply and divide mixed numbers and fractions.
	18.2 The laws of indices	To know and use the laws of indices.

	18.3 Writing large numbers in standard form	Write large numbers in standard form.
		Convert large numbers from standard form into ordinary numbers.
	18.4 Writing small numbers in standard form	Write small numbers in standard form.
		Convert numbers from standard form with negative powers of ordinary numbers
	18.5 Calculating with standard form	To multiply and divide numbers in standard form.
		To add and subtract numbers in standard form.
AUTUMN	19 Congruence, similarity and vectors	
	19.1 Similarity and enlargement	Understand similarity.
		Use similarity to solve angle problems.
	19.2 More similarity	Find the scale factor of an enlargement.
		Use similarity to solve problems.
	19.3 Using similarity	Understand the similarity of regular polygons.
		Calculate perimeters of similar shapes.
	19.4 Congruence 1	Recognise congruent shapes.
		Use congruence to work out unknown angles.
	19.5 Congruence 2	Use congruence to work out unknown sides.
	19.6 Vectors 1	Add and subtract vectors.
		Find the resultant of two vectors.
	19.7 Vectors 2	Subtract vectors.
		Find multiples of a vector.
AUTUMN	20 More algebra	
	20.1 Graphs of cubic and reciprocal functions	Draw and interpret graphs of cubic functions.
		Draw and interpret graphs of $y = 1/x$.
	20.2 Non-linear graphs	Draw and interpret non-linear graphs to solve problems.
	20.3 Solving simultaneous equations graphically	Solve simultaneous equations by drawing a graph.
		Write and solve simultaneous equations.
	20.4 Solving simultaneous equations algebraically	Solve simultaneous equations algebraically.
	20.5 Rearranging formulae	Change the subject of a formula.
	20.6 Proof	Identify expressions, equations, formulae and identities.
		Prove results using algebra.
END OF TERM 4 TEST		
Revision		