YEAR 11	Edexcel GCSE (9-1) Mathematics		
TERM	UNIT / LESSON	PRIOR KNOWLEDGE	LEARNING INTENTIONS
Key: Italic specification references are assumed prior knowledge and are covered in the prior knowledge check rather than the main teaching.			
AUTUMN 1	**9 Equations and inequalities**	Understand the ≥ and ≤ symbols. Substitute into, solve and rearrange linear equations. Factorise simple quadratic expressions. Recognise the equation of a circle.	
Wk 1 04/09/2024	9.5 More simultaneous equations	Recall the equation of a straight line. Solve simple simultaneous equations.	Use simultaneous equations to find the equation of a straight line. Solve linear simultaneous equations where both equations are multiplied. Interpret real-life situations involving two unknowns and solve them.
Wk 2 09/09/2024	9.6 Solving linear and quadratic simultaneous equations	Identify different types of equations. Solve quadraric equations.	Solve simultaneous equations with one quadratic equation. Use real-life situations to construct quadratic and linear equations and solve them.
	9.7 Solving linear inequalities	Understand inequality signs Construct correct inequalities from given information	Solve inequalities and show the solution on a number line and using set notation.
	10 Probability	Understand that a probability is a number between 0 and 1, and distinguish between events which are impossible, unlikely, even chance, likely, and certain to occur. Mark events and/or probabilities on a probability scale of 0 to 1. Know how to add and multiply fractions and decimals. Express one number as a fraction of another. List all outcomes for a single event systematically.	

			Make predictions from experimental data. Complete a two-way table.	
Wk 3 16/09/2024	10.1 Combined events	List all outcomes for a single event systematically.	Use the product rule for finding the number of outcomes for two or more events.	
		List all outcomes for two events systematically.	List all the possible outcomes of two events in a sample space diagram.	
	10.2 Mutually exclusive events	Add decimals. Subtract decimals and fractions from 1. Understand the relationship between ratios and fractions.	Identify mutually exclusive outcomes and events. Find the probabilities of mutually exclusive outcomes and events. Find the probability of an event not happening.	
	10.3 Experimental probability	Simplify fractions. Multilply whole numbers by decimals.	Work out the expected results for experimental and theoretical probabilities. Compare real results with theoretical expected values to see if a game is fair.	
Wk 4 23/09/2024	10.4 Independent events and tree diagrams	Add and multiply fractions and decimals.	Draw and use frequency trees. Calculate probabilities of repeated events. Draw and use probability tree diagrams.	
	10.5 Conditional probability	Know that the probability of something not happening is 1 minus the probability of the event happening. Draw and use probability tree diagrams.	Decide if two events are independent. Draw and use tree diagrams to calculate conditional probability. Draw and use tree diagrams without replacement. Use two-way tables to calculate conditional probability.	
	10.6 Venn diagrams and set notation	Interpret inequalities. Use Venn diagrams.	Use Venn diagrams to calculate conditional probability. Use set notation.	
Wk 5 30/09/2024	**11 Multiplicative reasoning**	Find a percentage of an amount and relate percentages to decimals. Rearrange equations and use these to solve problems.		

		Know speed = distance/time, density = mass/volume. Convert between metric units. Solve simple direct and indirect proportion problems, including currency conversion.	
	11.1 Growth and decay	Understand the use of indices.	Find an amount after repeated percentage changes.
		Work out the decimal multiplier for a percentage increase/decrease.	Solve growth and decay problems.
	11.2 Compound measures	Calculate simple rates. Substitute numbers into equations, and solve for the unknown. Use speed = distance/time to solve problems.	Calculate rates. Convert between metric speed measures. Use a formula to calculate speed and acceleration.
	11.3 More compound measures	Convert between metric units. volume of a prism.	Solve problems involving compound measures.
Wk 6 **07/10/2024**	11.4 Ratio and proportion	Rearrange formulae. Recognise graphs of y = x and y = 1/x. Find the gradient of a line given its equation. Decide whether quantities are in direct proportion.	Use relationships involving ratio. Use direct and indirect proportion.
	12 Similarity and congruence	Recognise and enlarge shapes and calculate scale factors. Know how to calculate area and volume in various metric measures. Measure lines and angles, and use compasses, ruler and protractor to construct standard constructions. Recognise congruent shapes. Know basic angle facts.	
Wk 7 **14/10/2024**	12.1 Congruence	Know the angle sum of interior angles of a triangle. Recognise congruent shapes. Recall basic angle facts.	Show that two triangles are congruent. Know the conditions of congruence.

			Find missing lengths using Pythagoras' theorem.	
		12.2 Geometric proof and congruence	Know the conditions of congruence and use correct mathematical notation for equal angles and sides. Recall the properties of special triangles and quadrilaterals.	Prove shapes are congruent. Solve problems involving congruence.
		12.3 Similarity	Use geometric properties to find similarities and differences between given polygons. Calculate scale factors.	Use the ratio of corresponding sides to work out scale factors. Find missing lengths on similar shapes.
Wk 8		12.4 More similarity	Find area scale factor, given length scale factor.	Use similar triangles to work out lengths in real life.
21/10/2024				Use the link between linear scale factor and area scale factor to solve problems.
		12.5 Similarity in 3D solids	Work out the volume and surface area of a cube. Convert between metric units. Work out cubes and cube roots.	Use the link between scale factors for length, area and volume to solve problems.
		Half Term		