

YEAR 10 Autumn 2021		Higher				
DATES	UNIT / LESSON	PRIOR KNOWLEDGE	GRADE FROM ...	GRADE TO ...	OBJECTIVES	Corbett
	9 Equations and inequalities	Understand the \geq and \leq symbols. Substitute into, solve and rearrange linear equations. Factorise simple quadratic expressions. Recognise the equation of a circle.	3	9		
6-Sep	9.1 Solving quadratic equations 1	Know that a square has two possible roots Find the factors of a given number. Factorise expressions. Solve simple equations containing a squared term.	4	6	Find the roots of quadratic functions. Rearrange and solve simple quadratic equations.	117/118 266
13-Sep	9.2 Solving quadratic equations 2	Understand the term quadratic Find positive and negative square roots. Solve quadratic equations by factorising. Expand two pairs of brackets. Simplify surds.	5	7	Solve more complex quadratic equations. Use the quadratic formula to solve a quadratic equation.	119/266 267
20-Sep	9.3 Completing the square	Expand and simplify a square bracket. Simplify surds. Solve simple equations, giving the answer in surd form.	4	9	Complete the square for a quadratic expression. Solve quadratic equations by completing the square.	267a
27-Sep	9.4 Solving simple simultaneous equations	Substitute into simple algebraic expressions. Rearrange equations.	5	7	Solve simple simultaneous equations. Solve simultaneous equations for real-life situations.	295
	9.5 More simultaneous equations	Recall the equation of a straight line. Solve simple simultaneous equations.	6	6	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.	296/297 295
4-Oct	9.6 Solving linear and quadratic simultaneous equations	Identify different types of equations. Solve quadratic equations.	7	9	Solve simultaneous equations with one quadratic equation. Use real-life situations to construct quadratic and linear equations and solve them.	298
11-Oct	9.7 Solving linear inequalities	Understand inequality signs Construct correct inequalities from given information	3	6	Solve inequalities and show the solution on a number line and using set notation.	177
	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.	3	9		
18-Oct	10.1 Combined events	List all outcomes for a single event systematically. List all outcomes for two events systematically.	3	5	Use the product rule for finding the number of outcomes for two or more events. List all the possible outcomes of two events in a sample space diagram.	253 246
	10.2 Mutually exclusive events	Add decimals. Subtract decimals and fractions from 1. Understand the relationship between ratios and fractions.	3	4	Identify mutually exclusive outcomes and events. Find the probabilities of mutually exclusive outcomes and events. Find the probability of an event not happening.	244/245 250
	10.3 Experimental probability	Simplify fractions. Multiply whole numbers by decimals.	3	5	Work out the expected results for experimental and theoretical probabilities. Compare real results with theoretical expected values to see if a game is fair.	249
HALF TERM						
1-Nov	10.4 Independent events and tree diagrams	Add and multiply fractions and decimals.	4	7	Draw and use frequency trees. Calculate probabilities of repeated events. Draw and use probability tree diagrams.	376 252
8-Nov	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.	5	9	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.	249 247
	10.6 Venn diagrams and set notation	Interpret inequalities. Use Venn diagrams.	3	7	Use Venn diagrams to calculate conditional probability. Use set notation.	380
	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.	3	6		
15-Nov	11.1 Growth and decay	Understand the use of indices. Work out the decimal multiplier for a percentage increase/decrease.	5	6	Find an amount after repeated percentage changes. Solve growth and decay problems.	233/239
22-Nov	11.2 Compound measures	Calculate simple rates. Substitute numbers into equations, and solve for the unknown. Use speed = distance/time to solve problems.	3	4	Calculate rates. Convert between metric speed measures. Use a formula to calculate speed and acceleration.	299
29-Nov	11.3 More compound measures	Convert between metric units.	3	5	Solve problems involving compound measures.	384/385
6-Dec	11.4 Ratio and proportion	Recall the formulae for the area of a circle and volume of a prism. 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.	3	6	Use relationships involving ratio. Use direct and indirect proportion.	40/356 254/255
END OF TERM 4 TEST						