

YEAR 9		Autumn 2021		Higher		
DATES	UNIT / LESSON	PRIOR KNOWLEDGE	GRADE FROM ...	GRADE TO ...	OBJECTIVES	Corbett
	<b>1 Number</b>	Have a firm grasp of place value and be able to order integers and decimals and use the four operations.  Know integer complements to 10 and to 100, multiplication facts to $10 \times 10$ , strategies for multiplying and dividing by 10, 100 and 1000. Have encountered squares, square roots, cubes and cube roots and have knowledge of classifying integers.	<b>3</b>	<b>9</b>		
6-Sep	1.1 Number problems and reasoning	Multiply numbers in a similar format to questions later in the section. List possible outcomes from two events.	<b>3</b>	<b>6</b>	Work out the total number of ways of performing a series of tasks.	253
13-Sep	1.2 Place value and estimating	Estimate the value of a square root.  Round numbers to a specified degree of accuracy.  Apply the four operations.	<b>3</b>	<b>4</b>	Estimate an answer.  Use place value to answer questions.	215
20-Sep	1.3 HCF and LCM	Multiply prime factors together. List the factors of a number.	<b>4</b>	<b>5</b>	Write a number of the product of its prime factors. Find the HCF and LCM of two numbers.	223 224
27-Sep	1.4 Calculating with powers (indices)	Work out simple powers.  Apply the four operations.	<b>3</b>	<b>5</b>	Use powers and roots in calculations.  Multiply and divide using index laws. Work out a power raised to a power.	172 174
4-Oct	1.5 Zero, negative and fractional indices	Convert between fractions and decimals.  Use the laws of indices for positive indices.	<b>5</b>	<b>9</b>	Use negative indices.  Use fractional indices.	175 173
11-Oct	1.6 Powers of 10 and standard form	Multiply by powers of 10 when the number is written as an ordinary number and not an index.  Review different ways to divide by 10. Use negative indices.	<b>4</b>	<b>6</b>	Write a number in standard form.  Calculate with numbers in standard form.	300 301-303
18-Oct	1.7 Surds	Review the meaning of the dot in the recurring notation. Identify the missing multiple which practices the skills of searching for a perfect square factor.	<b>7</b>	<b>8</b>	Understand the difference between rational and irrational numbers.  Simplify a surd.  Rationalise a denominator.	230 305 307
HALF TERM						
	<b>2 Algebra</b>	Use negative numbers with the four operations and recall and use hierarchy of operations and understand inverse operations. Use a calculator for decimals and negative numbers.  Use index laws numerically. Use and interpret algebraic notation. Set up and solve simple equations. Recall the definitions of geometric and arithmetic sequences.	<b>3</b>	<b>7</b>		
1-Nov	2.1 Algebraic indices	Recognise that squaring and taking the square roots, and cubing and taking the cube root, are inverse operations. Calculate with powers.	<b>4</b>	<b>7</b>	Use the rules of indices to simplify algebraic expressions.	17
8-Nov	2.2 Expanding and factorising	Simplify algebraic terms, including using index notation. Multiply a single term over a bracket. Find highest common factors.	<b>3</b>	<b>7</b>	Expand brackets.  Factorise algebraic expressions.	308 117
15-Nov	2.3 Equations	Solve a simple equation expressed in words. Solve simple algebraic equations Find lowest common multiples.	<b>3</b>	<b>6</b>	Solve equations involving brackets and numerical fractions. Use equations to solve problems.	110-113 114-115
22-Nov	2.4 Formulae	Substitute values into a one-step formula. Write numbers in standard form.	<b>3</b>	<b>6</b>	Substitute numbers into formulae. Rearrange formulae. Distinguish between expressions, equations, formulae and identities.	20 7,8
29-Nov	2.5 Linear sequences	Find the next term of a given arithmetic sequence.  Substitute values in a simple linear expression.  Write terms in a sequence given the nth term. Use a function machine to find outputs.	<b>3</b>	<b>5</b>	Find a general formula for the nth term of an arithmetic sequence.  Determine whether a particular number is a term of a given arithmetic sequence.	288, 289
6-Dec	2.6 Non-linear sequences	Find the next term of given sequences. Identify arithmetic and geometric sequences. Find the term-to-term rule for a sequence.	<b>3</b>	<b>6</b>	Solve problems using geometric sequences. Work out terms in Fibonacci-like sequences. Find the nth term of a quadratic sequence.	375 287a 388
	TEST					
13-Dec	2.7 More expanding and factorising	Recalling a square root.  Finding the factor pairs of small integers.	<b>4</b>	<b>7</b>	Expand the product of two brackets.  Use the difference of two squares. Factorise quadratics of the form $x^2 + bx + c$ .	14 120 118
END OF TERM 1 TEST						