YEAR 10	Summer 2021			Foundation		
DATES	UNIT / LESSON	PRIOR KNOWLEDGE	GRADE FROM …	GRADE TO …	OBJECTIVES	Corbett
19/04/2021	13.5 Tree diagrams	Calculate with fractions. List the possible outcomes for two events. Work out the probability of something not happening. Calculate probabilities.	3	5	Use frequency trees and tree diagrams. Work out probabilities using tree diagrams. Understand independent events.	252 249
26/04/2021	13.6 More tree diagrams	Calculate with and simplify fractions. Work out probabilities using tree diagrams.	3	5	Understand when events are not independent. Solve probability problems involving events that are not independent.	
	14 Multiplicative reasoning	Interpret scales on a range of measuring instruments. Convert between metric measures. Understand ratio notation, and be able to write a ratio in its simplest form. 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. Find the equation of a line from a graph. Identify a graph showing direct proportion.	3	5		
03/05/2021	14.1 Percentages	Convert percentages to decimals. Express one number as a percentage of another. Work out percentage increases and decreases.	4	4	Calculate a percentage profit or loss. Express a given number as a percentage of another in more complex situations. Find the original amount given the final amount after a percentage increase or decrease	 240
	14.2 Growth and decay	Write powers of numbers in index form. Relate percentages to decimals.	4	4	Find an amount after repeated percentage change. Solve growth and decay problems.	239
10/05/2021	14.3 Compound measures	Understand 'rate' as a mathematical concept. Substitute into and solve equations. Rearrange equations. Convert between metric units of volume. Calculate the area of a trapezium. Calculate the volume of a prism.	3	4	Solve problems involving compound measures.	347
	14.4 Distance, speed and time	Find speed in km/h, given distance travelled in minutes. Convert between metric units of length.	3	4	Convert between metric speed measures. Calculate average speed, distance and time. Use formulae to calculate speed and acceleration.	299
17/05/2021	14.5 Direct and inverse proportion	Identify graphs showing direct proportion. Write a ratio as a unit ratio.	3	5	Use ratio and proportion in measures and conversions. Use inverse proportions.	254
END OF TERM 5 TEST						
	15 Constructions, loci and bearings	Measure and draw lines.	1	4		

		Write a ratio in the form 1 : m and in its simplest form. Know the 8 points of the compass. Draw a net of a 3D shape. Know clockwise, anticlockwise. Identify congruent shapes.					
24/05/2021	15.1 3D solids	Recall names of common 2D shapes.	**1**	**2**	Recognise 3D shapes and their properties. Describe 3D shapes using the correct mathematical words. Understand the 2D shapes that make up 3D objects.	3 4 5	names 3-d shapes nets faces, edges vertices
	15.2 Plans and elevations	Identify names of 2D shapes from faces of 3D solids. Recall names of common 3D shapes. Know the properties of special triangles and quadrilaterals.	**3**	**3**	Identify and sketch planes of symmetry of 3D shapes. Understand and draw plans and elevations of 3D shapes. Sketch 3D shapes based on their plans and elevations.		
	15.3 Accurate drawings 1	Understand of the meaning of 'congruence'. Draw lines, angles and circles accurately	**3**	**3**	Make accurate drawings of triangles using a ruler, protractor and compasses. Identify SSS, ASA, SAS and RHS triangles as unique from a given description. Identify congruent triangles	22 28 + 31 81,82,83	congruent shapes drawing + measuring angles construction ASA, SAS, SSS
HALF TERM							
07/06/2021	15.4 Scale drawings and maps	Work out scale factor of an enlargement. Write a ratio in the form 1 : m, and write equivalent ratios. Convert between metric measurements of length.	**2**	**3**	Draw diagrams to scale. Correctly interpret scales in real-life contexts. Use scales on maps and diagrams to work out lengths and distances. Know when to use exact measurements and estimations on scale drawings and maps. Draw lengths and distances correctly on given scale drawings.	283/284 285	
	15.5 Accurate drawings 2	Knowledge of scale factors of enlargement. Identify a solid from its net.	**3**	**3**	Accurately draw angles and 2D shapes using a ruler, protractor and compasses. Construct a polygon inside a circle. Recognise nets and make accurate drawings of nets of common 3D objects.	73/74	
14/06/2021	15.6 Constructions	Identify parallel and perpendicular lines. Draw lines accurately.	**4**	**4**	Draw accurately using rulers and compasses. Bisect angles and lines using rulers and compasses.	72/78	
	15.7 Loci and regions	Convert distances from map scale to real life distance and vice versa. Construct the perpendicular bisector.	**4**	**4**	Draw loci for the path of points that follow a given rule. Identify regions bounded by loci to solve practical problems.	75/76/77	
21/06/2021	15.8 Bearings	Working out the complement to 180 or 360 (addition and subtraction). Recall the properties of angles at a point, angles on a straight line, alternate and corrsponding angles.	**2**	**4**	Find and use three-figure bearings. Use angles at parallel lines to work out bearings. Solve problems involving bearings and scale diagrams.	26/27	
	16 Quadratic equations and graphs	Square negative numbers. Substitute into formulae. Plot points on a coordinate grid. Expand single brackets and collect 'like' terms.	**3**	**5**			

28/06/2021	16.1 Expanding double brackets	Be able to work out area of a shape using algebraic terms. Simplify algebraic expressions. Multiply a single term over brackets.	**3**	**4**	Multiply double brackets. Recognise quadratic expressions. Square single brackets.	13/14
	16.2 Plotting quadratic graphs	Be able to square terms. Identify the equation of the mirror line. Copy and complete a table of values and plot a straight line graph.	**4**	**4**	Plot graphs of quadratic functions. Recognise a quadratic function. Use quadratic graphs to solve problems.	264/265
05/07/2021	16.3 Using quadratic graphs	Define the origin and x-axis on a graph. Copy and complete a table of values and plot a quadratic graph.	**4**	**5**	Solve quadratic equations ax2 + bx + c = 0 using a graph. Solve quadratic equations ax2 + bx + c = k Using a graph.	266 267c
12/07/2021	16.4 Factorising quadratic expressions	Work out factor pairs of negative numbers Multiply double brackets.	**4**	**5**		219/118
19/07/2021	16.5 Solving quadratic equations algebraically	Know that taking the square root of a number will result in both a positive and a negative answer. Factorise quadratic expressions.	**4**	**4**		228 119/266