YEAR 10	Spring 2021		Higher			
DATES	UNIT / LESSON	PRIOR KNOWLEDGE	GRADE FROM …	GRADE TO …	OBJECTIVES	Corbett
	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**		
04/01/2021	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
11/01/2021	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
25/01/2021	11.3 More compound measures	Convert between metric units. Recall the formulae for the area of a circle and volume of a prism.	**3**	**5**	Solve problems involving compound measures.	384/385 40/356
01/02/2021	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.	**3**	**6**	Use relationships involving ratio. Use direct and indirect proportion.	254/255
08/02/2021	TEST					
END OF TERM 4 TEST						
HALF TERM						
	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.	**3**	**9**		
22/02/2021	12.1 Congruence	Know the angle sum of interior angles of a triangle. Recognise congruent shapes. Recall basic angle facts. Find missing lengths using Pythagoras' theorem.	**3**	**7**	Show that two triangles are congruent. Know the conditions of congruence.	67 66
	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.	**9**	**9**	Prove shapes are congruent. Solve problems involving congruence.	328
01/03/2021	12.3 Similarity	Use geometric properties to find similarities and differences between given polygons. Calculate scale factors.	**3**	**6**	Use the ratio of corresponding sides to work out scale factors. Find missing lengths on similar shapes.	291 292
	12.4 More similarity	Find area scale factor, given length scale factor.	**6**	**8**	Use similar triangles to work out lengths in real life. Use the link between linear scale factor and area scale factor to solve problems.	293
08/03/2021	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.	**6**	**9**	Use the link between scale factors for length, area and volume to solve problems.	293/4
	13 More trigonometry	Use axes and coordinates to specify points in all four quadrants. Recall and apply Pythagoras' Theorem and trigonometric ratios. Substitute into formulae.	**6**	**9**		
15/03/2021	13.1 Accuracy	Find upper and lower bounds of a given measurement.	**7**	**8**	Understand and use upper and lower bounds in calculations involving trigonometry.	183/4
22/03/2021	13.2 Graph of the sine function	Know the exact values of sin θ for θ = 30°, 45° , 60° and 90° Use Pythagoras' theorem. Find angles using the sin function.	**7**	**9**	Understand how to find the sine of any angle. Know the graph of the sine function and use it to solve equations.	341/338
	13.3 Graph of the cosine function	Know the exact values of cos θ for θ = 30°, 45° , 60° and 90° Use Pythagoras' theorem. Find angles using the cos function.	**7**	**9**	Understand how to find the cosine of any angle. Know the graph of the cosine function and use it to solve equations.	341/339
	13.4 The tangent function	Know the exact values of tan θ for θ = 30°, 45° , 60° Use Pythagoras' theorem. Find angles using the tan function.	**7**	**9**	Understand how to fi nd the tangent of any angle. Know the graph of the tangent function and use it to solve equations.	341/340
29/03/2021	13.5 Calculating areas and the sine rule	Calculate the area of a triangle using (1/2)b × h Know the formula for calculating the area of a circle. Use trigonometry	**6**	**9**	Find the area of a triangle and a segment of a circle. Use the sine rule to solve 2D problems.	46/337