

YEAR 9		Spring 2021			Higher		
DATES	UNIT / LESSON	PRIOR KNOWLEDGE	GRADE FROM ...	GRADE TO ...	OBJECTIVES	Corbett	
	<b>3 Interpreting and representing data</b>	Read scales on graphs, draw circles, measure angles and plot coordinates in the first quadrant.  Have experience of tally charts. Use inequality notation. Find midpoint of two numbers. Find the range, mean, median and mode of a data set.	2	5			
04/01/2021	3.1 Statistical diagrams 1	Work out mode, median and range from a list of numbers.	2	4	Construct and use back-to-back stem and leaf diagrams.  Construct and use frequency polygons and pie charts.	169 163/4	
	3.2 Time series	Identify trends by noticing whether sequences of numbers increase, decrease or oscillate.	3	3	Plot and interpret time series graphs.  Use trends to predict what might happen in the future.	382	
11/01/2021	3.3 Scatter graphs	Recognise when a line has a positive, negative or zero gradient. Plot points on a coordinate grid, and identify points that do not lie on a straight line.	3	4	Plot and interpret scatter graphs.  Determine whether or not there is a linear relationship between two variables.	165-8	
	3.4 Line of best fit	Understand and be able to define the meaning of correlation. Read values from graphs.	3	4	Draw a line of best fit on a scatter graph.  Use the line of best fit to predict values.		
18/01/2021	3.5 Averages and range	Find the range of a list of numbers. Find the midpoint of two numbers.	3	5	Decide which average is best for a set of data. Estimate the mean and range from a grouped frequency table. Find the modal class and the group containing the median.		
25/01/2021	3.6 Statistical diagrams 2	Use subtraction to find missing values. Draw a bar chart. Draw a pie chart.	3	3	Construct and use two-way tables. Choose appropriate diagrams to display data. Recognise misleading graphs.	319	
	<b>4 Fractions, ratio and percentages</b>	Know the four operations of number. Find common factors. Have a basic understanding of fractions as being 'parts of a whole'. Define percentage as 'number of parts per hundred'.  Be aware that percentages are used in everyday life.  Use ratio notation, and to write a ratio in its simplest form.	3	7			
01/02/2021	4.1 Fractions	Identify unit fractions, improper fractions and mixed numbers. Multiply a whole number by a fraction. Know the priority of operations.	3	5	Add, subtract, multiply and divide fractions and mixed numbers.  Find the reciprocal of an integer, decimal or fraction.	21-24 145	
	4.2 Ratios	Multiply a fraction by its reciprocal for a product of 1. Simplify ratios. Write ratios in the form $n : 1$ .	3	4	Write ratios in the form $1 : n$ or $n : 1$ .  Compare ratios. Find quantities using ratios. Solve problems involving ratios.	269-271	
08/02/2021	4.3 Ratio and proportion	Write one number as a proportion of the total. Identify equivalent ratios.	3	5	Convert between currencies and measures. Recognise and use direct proportion. Solve problems involving ratios and proportion.	254	
	4.4 Percentages	Find a percentage of a given amount. Work out percentage multipliers.	3	6	Work out percentage increases and decreases. Solve real-life problems involving percentages.	233	
	4.5 Fractions, decimals and percentages	Convert between fractions, decimals and percentages. Solve simple equations.	3	7	Work out percentage increases and decreases.  Solve real-life problems involving percentages.		
HALF TERM							
	<b>5 Angles and trigonometry</b>	Rearrange simple formulae and equations, as preparation for rearranging trig formulae. Recall basic angle facts.  Understand that fractions are more accurate in calculations than rounded percentage or decimal equivalents. Recall the properties of special types of triangles and quadrilaterals.	3	6			
22/02/2021	5.1 Angle properties of triangles and quadrilaterals	Recognise special types of triangle and quadrilateral.  Recall basic angle facts.	3	3	Derive and use the sum of angles in a triangle and in a quadrilateral.  Derive and use the fact that the exterior angle of a triangle is equal to the sum of the two opposite interior angles.	37	
	5.2 Interior angles of a polygon	Name polygons and understand the meaning of 'regular polygon'. Substitute numbers into an expression. Find missing angles in triangles, quadrilaterals and at a point.	3	4	Calculate the sum of the interior angles of a polygon.  Use the interior angles of polygons to solve problems.	32	
	5.3 Exterior angles of a polygon	Find missing angles on a straight line.  Calculate the sum of interior angles of a polygon.	3	5	Know the sum of the exterior angles of a polygon.  Use the angles of polygons to solve problems.		
01/03/2021	5.4 Pythagoras' theorem 1	Recall square numbers and square roots.  Find the area of a square.	4	4	Calculate the length of the hypotenuse in a right-angled triangle.  Solve problems using Pythagoras' theorem.	257	
08/03/2021	5.4 Pythagoras' theorem 1	Find square roots.  Recognise perfect squares. Use Pythagoras' theorem to find the length of the hypotenuse.	5	5	Calculate the length of a shorter side in a right-angled triangle.  Solve problems using Pythagoras' theorem.		
15/03/2021	5.6 Trigonometry 1	Convert fractions to decimals.  Identify the hypotenuse.	3	6	Use trigonometric ratios to find lengths in a right-angled triangle.  Use trigonometric ratios to solve problems.	329-330	

		Use the angle sum of a triangle to work out missing angles.				
22/03/2021	5.7 Trigonometry 2	Identify the opposite and adjacent sides of a given angle in right-angled triangles. Use the trigonometric ratios to find lengths in right-angled triangles.	<b>3</b>	<b>6</b>	Use trigonometric ratios to calculate an angle in a right-angled triangle. Find angles of elevation and angles of depression.  Use trigonometric ratios to solve problems. Know the exact values of the sine, cosine and tangent of some angles.	331
29/03/2021						
<b>END OF TERM 2 TEST</b>						