YEAR 8 OVERVIEW – Maths

PONTEFRACT ACADEMIES TRUST

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
White Rose Maths - Year 8	**Ratio and scale**	**Working in Cartesian plane**	**Brackets, equations and inequalities**	**Fractions and percentages**	**Angles in parallel lines and polygons**	**Data handling cycle**
	• Understand ratio and its link to multiplication • Use ratio notation • Reduce ratios to simplest form • Solve ratio problems • Calculate the circumference of a circle • Careers Lesson – Baker/Chef	• Plot and interpret straight line graphs • Understand and use the equations of a straight line, including lines parallel to the axes • Make links between direct proportion and straight lines of the form $y = kx$ • Model situations by translating them into expressions, formulae and graphs	• Expand, and factorise into, single brackets • Form and use expressions, formulae and identities • Form and solve equations and inequalities with and without brackets • Distinguish between equations, expressions, formulae and identities • Careers Lesson – Construction	• Develop understanding of fractions, decimals and percentages • Evaluate percentage increases and decreases • Use multipliers to solve percentage problems • Express one number as a percentage of another	• Review y7 angle rules • Understand and use parallel lines and angles • Revisit geometric notation • Work out angles in special quadrilaterals • Find and use sum of interior and exterior angles in polygon • Prove simple geometric facts	• Understand and use primary and secondary source of data • Collect data, including questionnaires • Interpret and construct statistical diagrams, including multiple bar charts • Construct and interpret pie charts • Compare distributions using charts • Identify misleading graphs
	Multiplicative change	**Representing data**	**Sequences**	**Standard form**	**Area of trapezia and circles**	**Measure and location**
	• Use scale factors, linking ratio, to solve simple direct proportion problems • Convert between currencies, including using graphs • Draw and interpret scale diagrams and maps	• Draw and interpret scatter graphs • Understand correlation • Draw and use lines of best fit • Understand grouped and ungrouped, discrete and continuous data • Design and use one and two-way tables	• Generate sequences using more complex rules e.g. with brackets and squared terms, both in words and algebraically	• Convert between ordinary and standard form • Compare numbers given in standard form • Calculate with numbers given in standard form, with and without a calculator	• Review area of shapes covered in y7 • Calculate the area of a trapezium • Calculate the area of a circle, and parts of a circle • Use of significant figures • Calculate the area of compound shapes	• Revisit median and mean, including finding the total given the mean • Find the mean of grouped data • Work out mode and modal class • Choose the appropriate average • Compare distributions using measures
	Multiplying and dividing fractions	**Tables & probability**	**Indices**	**Number sense**	**Line symmetry and reflection**	**Straight line graphs**
	• Multiply and divide a fraction by an integer • Multiply and divide a fraction by a fraction • Understand and use reciprocal	• List outcomes using sample space diagrams for one and two events • Find probabilities using tables and Venn diagrams	• Form expressions using indices • Understand and use the addition and subtraction rules	• Develop mental strategies • Convert between metric measures and units • Estimation, including rounding to a given number of decimal places • Use the order of operations • Careers Lesson – Buyer	• Recognise line symmetry in polygons and other shapes • Reflect shapes in horizontal, vertical and diagonal lines	• Interpret straight line graphs • Find and use equation of a straight line