

KS3 Mathematics Curriculum Coverage:



Year 7 Spring Term

Sequenced	Block 1: Graphing data	Block 2 : Fractions decimals and percentages	Block 3: Directed number	Block 4: Fractions and percentages of amounts	Block 5: Perimeter and area
Key Knowledge	To know: - recognise different types of graphs and charts for representing data – pictograms, bar charts, line charts, pie charts, line graphs - features that make a misleading graph - the features of scatter diagrams including correlation and line of best fit - A line of best fit in maths is straight and does not need to pass through (0,0)	To know: - equivalent fractions between tenths and hundredths - common equivalent fractions, decimals and percentages $0.1 = \frac{1}{10} = 10\%$ $0.25 = \frac{1}{4} = 25\%$ $0.5 = \frac{1}{2} = 50\%$ $0.75 = \frac{3}{4} = 75\%$ $0.2 = \frac{1}{5} = 20\%$ $0.125 = \frac{1}{8} = 12.5\%$ - how to convert between fractions, decimals and percentages with tenths, hundredths, fifths, quarters	To know: - the order of directed numbers on a number line - numbers less than 0 are negative and numbers above 0 are positive - that subtraction is the additive inverse - that addition and multiplication are commutative and that subtraction and division are not - the hierarchy of operations - the meaning of zero pair	To know: - the meaning and effect of numerators and denominators of fractions as operators - that the denominator is the number of equal parts we share a quantity into - common percentage methods for finding 10%, 1%, 50%, 25%, 75% of an amount that finding a percentage of an amount over 100 or a fraction greater than 1 will lead to an increase (E)	To know: - metric conversions - formulae for the area of rectangles, triangles, parallelograms and trapezia. - methods for calculating the perimeter of polygons
Key Skills	To be able to: - draw and read from pictograms, line graphs and bar charts - draw and interpret pie charts - draw a scatter diagram - draw a line of best fit	To be able to: - position tenths and hundredths on a number line and represent on diagrams - convert between fractions and decimals with tenths, hundredths, fifths and quarters convert between fractions and decimals with eights and thousandths (E) - convert fluently between simple fractions, decimals and percentages	To be able to: - add directed numbers using zero pairs - subtract directed numbers using the additive inverse - multiply, including square, directed numbers - divide directed numbers - perform calculations with directed number using the hierarchy of operations - evaluate algebraic expressions using directed number using substitution - use a calculator with directed number calculate roots of positive numbers and explore higher powers and roots (E)	To be able to: - calculate fractions of amounts using bar models and other methods - calculate the whole given the fraction using bar models and other methods - calculate percentages using mental methods with 10%, 1%, 25%, 50%, 75% and $33\frac{1}{3}\%$ - read calculator displays to give answers to an appropriate degree of accuracy e.g. $\pounds 14.625 = \pounds 14.63$ - use a calculator to find more complex percentages of amounts including decimal percentages e.g. 4.3% of 256 identify when it is appropriate to use percentages over 100 and fractions greater than 1(E)	To be able to: - Calculate the perimeter of a polygon - Calculate the area of rectangles, triangles, parallelograms and trapezia - Solve problems involving perimeter and area in context Form expressions with area and perimeter (E)
	Tier 2 and 3 key vocabulary	Tier 2 and 3 key vocabulary	Tier 2 and 3 key vocabulary	Tier 2 and 3 key vocabulary	Tier 2 and 3 key vocabulary
Subject specific vocabulary	pictogram bar chart line chart tally frequency multiple bar chart scale axes comparison key pie chart line graph scatter graph	equivalent fraction decimal percentage represent convert position tenth hundredth fifth quarter eighth	directed number positive negative sum minus difference zero pair double sided counters reflection symmetry commutative sea level ascending descending greater than smaller than increase decrease product multiply inverse calculator sign change fraction button substitute evaluate order of operations hierarchy priority square square root indices power exponent root	fraction numerator denominator equal part bar model equivalent whole original decimal place value percent percentage convert	convert metric units kilometre centimetre metre millimetre formulae trapezia expression polygon