7	Sequences	Understanding and using algebraic notation	Equality and equivalence	Place value, integers and decimals	Fraction, decimal percentage equivalence	Addition, subtraction, multiplication and division	Four operations with directed number	addition/subtracti on of fractions	Developing number sense	Sets and probability	Prime numbers and proof	Constructing, measuring and using geometric notation	Develop geometric reasoning					
Detail	Exploring all types of sequence, term to term	Use of function machines, forming and substituting into expressions, functions graphically.	Expression equivalence. Forming and solving one step equations, collecting like terms	Place value, ordering, range and median, rounding	FDP equivalence, pie charts, fractional sequences. ASSESSMENT 1	using formal methods, solve problems in context with perimeter, area money, frequency trees and tables. HCF/LCM, BIDMAS, solving two step equatuons	Order directed numbers, calculate using directed number	Add subtract fractions different denominators, use equaivalent fractions. ASSESSMENT 2	Mental strategies, known facts to derive other facts - inc algebraically	Understand set notation, venn diagrams and probability of an event	types of number, primes, powers and roots, counter examples.	Drawing, measuring lines and angles, parallel/perpendicular, SSS, SAS, and ASA	Calculate using angle facts, around a point, straight line, vertically opposite, triangles and quadrilaterals ASSESSMENT 3					
8	Ratio and scale	Multiplicative change	Multiplying and diving fractions	Coordinates	Collecting and representing data	Tables	Brackets, equations and inequalities	sequences	Indices	Fractions and percentages	Standard Form	Number sense	Angles in parallel lines and polygons	Area of Trapezia and circles	Symmetry and reflection	Data Handling cycle	Averages	
Detail	Understand ratio, simplifying, link to multiplication, solve problems involving ratio, circumference of circles	Use scale factors with direct proportion and with scales and maps	fraction by integer and by	Plotting straight lines, equations of horizontal and vertical lines, link with expressions	Scatter graphs and correlation, two way tables, listing outcomes	Probability sample space tables ASSESSMENT 1	Expand single brackets, form expressions, form and solve equations and inequalities	Using more complex rules, brackets and squared terms	Writing expressions with powers (extension: factorising, expanding binomials, nth term of linear sequences)	Revisit FDP equivalence, one number as percentage of another	Conversion between standard and ordinary form, ordering.	Revisit BIDMAS, measures and units, estimation and mental strategies. ASSESSMENT 2	Review year 7 angle facts, angles in special quadrilaterals, angles in polygons	Review area of shapes Year 7. Area trapezium, circles and compound shapes	Line symmetry in polygons, reflecting shapes	Collecting data, constructing and interpreting charts	Revisit Mode, median and mean, inc. from grouped data ASSESSMENT 3	
9	Number types	Fractions	Ratio and Proportion	Percentages	Estimating and approximating	Algebraic expressions	Solving equations and formulae	Linear graphs and coordinates	Perimeter and area	Volume	Collecting and representing data and averages	Scattergraphs	Indices	Standard form	Probability	Angles	Properties of polygons	Transfor Theoremations and trigor etr
Detail	4 operations, directed number, LCM/HCF, prime factors, inverse operations,	Order fractions, use all 4 operations, mixed/improper and problem solving	Link to fractions, simplifying, sharing, multiplicative relationship, graphically. Proportion	Basic percentage, percenatge change, increase/decrease, reverse and simple interest and intro to percentage multipliers ASSESSMENT 1	Rounding to decimal places/significant figures, bounds and error interval	All notation, simplifying, basic expanding and common factors	Substitution, Solve equations inc. unknowns on both sides, change subject of formulae	Plot y = mx + c, identify parallel lines, explore gradients, draw other graphs ASSESSMENT 2	Perimeter and Area of all shapes, inc circles. Higher inc. sectors and arc lengths	Volumes of prisms, cones, spheres and pyramids. ASSESSMENT 3	Pie charts, stem and leaf, two way tables, time series. Calculate the three averages, compare using average and spread	Use and interpret, recognise correlation, make predictions	Calculate using indices, use index laws inc. negative and fractional indices	Place value, calculate and interpret standard form (calc and non- calc) ASSESSMENT 4	All probability. Single events, combined events, relative frequency, tree diagrams, conditional probability, venn diagrams	All notation, at a point, straight line, vertically opposite and with parallel lines.	Special quadrilaterals, angles in polygons, exterior and interior	rotate, translate Know and use enlarge pythag (positive 'theo and and t negative ratio
10	Overlearning: number stuff	Overlearning: algebraic expressions	Overlearning plus: Solving equations	Overlearning plus: Angles and Properties of polygons	Overlearning Fractions	Coordinates and straight lines	Indices	Standard form	Percentages and growth and decay	Ratio and Proportion	Pythagoras' Theorem	Review plus: Perimeter and area	Volume	Probability and sets	Transformations	Collecting and representing data and averages	Scattergraphs	Constructi ons and Loci Repre
Detail	A combination of: 4 operations with integers and decimals, directed number, inverse operations, number types, LCM/HCF, prime factors Upper and lower bounds, error intervals	Simplfy expressions using all the proper notation inc with brackets and use of fractions. Expanding brackets, factorising using common factors	Solve equations inc unknowns on both sides, forming and solving equations in a variety of contexts linking to many previous topic areas	All angle facts, inc. with parallel lines and angles in polygons, exterior and interior. Problem solving and linking with forming and solving equations	Revisit all fractions: Ordering, all 4 operations, mixed/improper and problem solving, simple algebraic fractions	Plotting straight lines, equations of horizontal, vertical and diagonal lines, understanding of gradient and intercept in y=mx+c	Calculate using indices, use index laws	Place value, calculate and interpret standard form (calc and non- calc) ASSESSMENT 2	Review of basics plus: Percentage change, increase/decrease, using multipliers for growth and decay problems, simple and compound interest	Simplifying, sharing and solving problems using ratio, simple combined ratios, simple multiplicative reasoning (best buys, currency conversions) ASSESSMENT 3	Understand and use pythagoras' theorem inc problem solving	Perimeter and Area of all shapes, inc circumference and area of circles	Volumes of cuboids and other simple prisms inc. change of units ASSESSMENT 4	All probability. Single events, combined events, relative frequency, tree diagrams, venn diagrams	Reflect, rotate, translate and enlarge (only positive scale factors)	Pie charts, stem and leaf, two way tables, time series. Calculate the three averages, compare using average and spread	Use and interpret, recognise correlation, make predictions	perpendicu lar sid bisector, angle bisect, and loci problems Plan vi front.
11	Compound measure	Overlearning: algebraic expressions	Simultaneous equations, inequalities	Overlearning: Percentages	Sequences	Vectors	Overlearning: Ratio and Proportion	Congruence and similarity	Quadratics	Quadratic equations	Further graphs	Trigonometry	Overlearning: Statistics	Overlearning: Linear and other graphs	r			·
Detail	Speed, density and pressure.	Simplfy expressions using all the proper notation inc with brackets and use of fractions. Expanding brackets, factorising	Solve linear simultaneous equations, algebraically and graphically. Solve linear inequalities and show on number line	Basic percentage, percentage change, increase/decrease, reverse and simple interest and intro	Exploring all types of sequence, term to term and nth terms of linear sequences	Addition and subtraction of vectors, multiplication by a scalar, both diagrammatic and	Simplifying, sharing and solving problems using ratio, simple combined ratios, simple multiplicative	Conditions for congruence, similar shapes and using similarity to calculate missing	Expanding one and two binomials, factorise quadratics inc difference of two squares solving	Solving quadratic equations using factorising, sketching quadratic graphs	Plotting/drawing graphs of quadratics, cubics and reciprocal	Understand and use the three trig ratios. Know the exact trig ratios for sin, cos and tan for angles of	Revisit all previous representations and all measures of average and spread.	Plot y = mx + c, identify parallel lines, explore gradients, draw other graphs				

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Changing the subject

using common factors and quadratics. Solving equations

linear sequences

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