

	Autumn Term		Spring Term		Summer Term	
Topic Big question / Overview	Numbers and the number system Convert numbers into standard form and vice versa. Mathematical movement Understand and use lines parallel to the axes, y=x and y=-x Calculating part 1 Calculating with decimals	Calculating part 2 Apply the order of operations including brackets and powers. Understanding risk I Calculate theoretical probabilities for single events. Measuring data interpret, analyse and compare the distributions of data sets. Algebraic proficiency: tinkering Factorise an expression by	Algebraic proficiency: <u>tinkering</u> Change the subject of a formula when two steps are required. <u>Proportional reasoning</u> Find a relevant multiplier when solving problems involving proportion. <u>Pattern sniffing</u> Explore number sequences.	Investigating angles apply the properties of angles at a point, angles at a point on a straight line, vertically opposite angles <u>Calculating fractions,</u> <u>decimals and</u> <u>percentages</u> Use calculators to increase and decrease an amount by a percentage using multiplicative methods.	Solving equations and inequalities Solve linear equations with unknowns on both sides. Calculating space Apply the formulae for circumference and area of a circle.	Algebraic proficiency: visualising Plot and interpret graphs of linear functions. Understanding risk II Develop understanding of probability Presentation of data Construct and interpret graphs
Disciplinary knowledge/skills	Reasoning and problem solving with different forms of numbers and graphs.	Problem solving involving measuring data and factorising expressions.	Developing proportional reasoning skills.	Making links to solve angle problems. Further reasoning to calculate FDP.	Forming and solving equations or calculating areas.	Plotting graphs to visualise patterns.
New vocabulary	Prime factorisation Product Venn diagram Standard form Significant figure (Cartesian) coordinates Axis, axes, x-axis, y-axis Origin Quadrant Operation Inverse Long multiplication Short division	Power Indices Roots Probability, Event Outcome Impossible, Unlikely, Evens chance, Likely, Certain Equally likely Mutually exclusive Exhaustive Possibility space Experiment Calculate an estimate Grouped frequency Midpoint Consistency Variable	Formula, Formulae Change the subject Multiplier Speed Unitary method Units Compound unit Pattern Sequence Linear Term Term-to-term rule Position-to-term rule Ascending Descending	Vertically opposite Parallel Alternate angles, corresponding angles Interior angle, exterior angle Regular polygon Proper fraction, improper fraction, top-heavy fraction, vulgar fraction Multiplier Increase, decrease Percentage change	Equation Operation Solve Brackets Symbol Substitute Graph Point of intersection Circle Centre Radius, diameter, chord, circumference Pi	Linear Coordinate plane Gradient y-intercept Experiment, Combined experiment Frequency tree Enumerate Set Venn diagram Possibility space, sample space Axis, axes Scatter graph (scatter diagram, scattergram, scatter plot) Bivariate data (Linear) Correlation Positive correlation,
	Big question / Overview Disciplinary knowledge/skills	Topic Big question / OverviewNumbers and the number system Convert numbers into standard form and vice versa.Mathematical movement Understand and use lines parallel to the axes, y=x and y=-xCalculating part 1 Calculating with decimalsDisciplinary knowledge/skillsReasoning and problem solving with different forms of numbers and graphs.New vocabularyPrime factorisation Product Venn diagram Standard form Significant figure (Cartesian) coordinates Axis, axes, x-axis, y-axis Origin QuadrantOperation Inverse Long multiplication	Topic Big question / OverviewNumbers and the number system Convert numbers into standard form and vice versa.Calculating part 2 Apply the order of operations including brackets and powers.Mathematical movement Understand and use lines parallel to the axes, y=x and y=-xUnderstanding risk I Calculating part 1 Calculating part 1 Calculating with decimalsCalculate theoretical probabilities for single events.Disciplinary knowledge/skillsReasoning and problem solving with different forms of numbers and graphs.Problem solving involving measuring data and factorise an expression by taking out common factors.New vocabularyPrime factorisation Product Ven diagram Standard form Significant figure (Cartesian) coordinates Axis, axes, x-axis, y-axis Origin QuadrantPower Indices Probability, Event Outcome Impossible, Unlikely, Evens chance, Likely, Certain Equally likely Mutually exclusive Exhaustive Possibility space ExperimentOperation Inverse Long multiplication Short divisionSandard form Significant figureOperation Inverse Long multiplication Short divisionProbability, Event Outcome Induce Calculate an estimate Grouped frequency Midpoint Consistency	Topic Big question / Overview Numbers and the number system Calculating part 2 Apply the order of operations including brackets and powers. Algebraic proficiency: Change the subject of a formula when two steps are required. Mathematical movement Understand and use lines parallel to the axes, y=x and y=-x Understanding risk1 Calculate theoretical probabilities for single events. Proportional reasoning Find a relevant multiplier when solving problems involving proportion. Disciplinary knowledge/skills Reasoning and problem solving with different forms of numbers and graphs. Problem solving involving measuring data and factorising expressions. Developing proportional reasoning skills. New vocabulary knowledge/skills Prime factorisation Product Venn diagram Significant figure (Cartesian) coordinates Axis, axes, x-axis, y-axis Origin Quadrant Prime factorisation Probability, Event Outcome Inverse Long multiplication Short division Prower Probability, Event Outcome Inverse Long multiplication Short division Power Probability, Event Outcome Inverse Long multiplication Short division Power Probability, Event Outcome Inverse Long multiplication Short division Power Probability space Experiment Calculate an estimate Grouped frequency Midpoint Consistency Formula, Formulae Change the subject	Topic Big question / Overview Numbers and the number system Calculating part 2 Apply the order of operations including brackets and powers. Algebraic proficiency: tinkering Investigating angles apply the properties of apply the properint properintis properties of the properties of apply the properi	Topic Big question / Overview Numbers and the number of mand vice versa. Calculating part 2 Apply the order of operation including brackets and powers. Calculating part 2 Apply the order of operation including brackets and powers. Calculating part 2 and power how of of operation and use lines parallel to the ases, yes and ye-x Solving equations and including brackets and powers. Solving equations and including brackets and powers. Disciplinary knowledge/skills Mathematica movement understand and use lines parallel to the ases, yes and ye-x Adapt the inderstand and use lines parallel to the ases, yes and ye-x Measuring data interpret, analyze and calculating part 1 Calculating part 1 Calculating part 1 Calculating and problem of numbers and graphs. Adapt the inderstand part operations and problem solving involving measuring data and factorising expressions. Calculating fractions of numbers and graphs. Solving equations and interpret, analyze and crice. Calculating fractions data sets. Calculating parce proportional Calculating fractions data sets. Calculating parce parcentages use calculators to increas and decrease an anount by a percentage using multiplicative methods. Calculating fractions data sets. Disciplinary knowledge/skills Reasoning and problem significant figure toring fractorisation product (Cartesian) coordinates data, and percentages of numbers and graphs. Problem solving involving measuring data and factorising expressions. Developing proportional factorising expressions. Making links to solve angle problems. Further reasoning to calculate FDP.