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|  | **Half term points** | | | | | |
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| **AUTUMN 1** | **AUTUMN 2** | **SPRING 1** | **SPRING 2** | **SUMMER 1** | **SUMMER 2** |
| N1.8 Multiplying decimals  N2.3 Multiplying and dividing by powers of 10  N2.5 Using the number system effectively  N2.6 Writing numbers in standard form  A3.2 Plotting graphs of linear functions  A3.3 The equation of a straight line  A1.6 Using brackets  GM6.3 Volume and surface area of cuboids  **Hot assessments per topic – 10 questions**  **LBQ Sats paper** | (N5.3 Converting between fractions, decimals and percentages)  N5.4 Applying percentage increases and decreases to amounts  GM 2.7 Angles and parallel lines  SP2.3 Vertical line charts  SP2.4 Pie charts  GM6.2 Understanding nets  GM6.4 2-D representations of 3-D shapes  **Hot assessments per topic – 10 questions** | A1.5 Setting up and solving simple equations  A1.7 Working with more complex equations  N1.9 Dividing decimals  N4.4 Adding and subtracting fractions  N4.5 Working with mixed numbers  GM3.2 Finding area and perimeter  GM6.3 Volume and surface area of cuboids  GM6.5 Prisms  **Hot assessments per topic – 10 questions** | N4.3 Multiplying fractions  SP4.2 Single event probability  N1.7 BIDMAS  N2.6 Writing numbers in standard form  A3.4 Plotting quadratic and cubic graphs  **Hot assessments per topic – 10 questions**  **LBQ Sats paper** | GM3.3 Circumference  GM3.4 Area of circles  GM5.6 Enlargement  GM5.7 Similarity  A2.3 Linear sequences  A2.4 Special sequences  **Hot assessments per topic – 10 questions** | N3.4 Rounding decimals  N3.5 Significance  GM2.6 Types of quadrilaterals  GM2.8 Angles in a polygon  A3.3 The equation of a straight line  A3.4 Plotting quadratic and cubic graphs  **Hot assessments per topic – 10 questions** |
| **Key skills and knowledge assessed:**  **Key Skills**   * Draw linear graphs * Multiply and divide by powers of ten (inc Decimals) * Understand and use place value to multiply decimals * Factorise an expression by taking out common factors * Expand more than one bracket * Calculate in standard form – with and without a calculator. Convert numbers into standard form and vice versa   **Key knowledge**:   * Know how to set up the axis for graphs * Know the process of multiplying and dividing by powers of ten * Know and use the number system to solve problems * Know how to use place value multiply decimals * Know how to interpret a calculator display when working with standard form | **Key skills and knowledge assessed:**  **Key Skills:**   * Convert between mixed numbers and improper fractions, decimals and percentages * Use angle facts for angles on parallel lines. * Interpret and construct pie charts * 2-D representations of 3-D shapes   **Key knowledge:**   * Know percentage and decimal equivalents with a denominator of 2, 3, 4, 5, 8 and 10 * know how to identify parallel and know exterior and perpendicular lines * Know how to create and use pie charts * Know how to represent 2-D on 3-D shapes | **Key skills and knowledge assessed:**  **Key Skills:**   * Properties of triangles and quadrilaterals * Set up, solve and interpret linear equations * Solve more complex linear equations * Add, subtract, with fractions and mixed numbers * Solve problems using the perimeter/ area of compound or more complicated shapes * Work out the surface area/ volume of cuboids in context * Work out the surface area/ volume of cylinders, pyramids, spheres, hemispheres, cones, and prisms   **Key knowledge:**   * Know how to set, solve and interpret linear equations * Know how to solve more complex equations * Know how + - fractions * Know how to identify the formulae required to find the area/perimeter of compound shapes and reverse processes * Know how to find the surface area of shapes * Know the formula for the volume of a cuboid * know that volume of a prism = area of face x depth | **Key skills and knowledge assessed:**  **Key Skills:**   * Multiply fractions with mixed numbers * Calculate probabilities from dependent or independent events * Draw quadratic graphs and graphs of real life situations   **Key knowledge:**   * Know how to multiply fractions * know that the sum of probabilities for a single event is 1 * Know how to plot quadratic and cubic graphs | **Key skills and knowledge assessed:**  **Key Skills:**   * Transformations, describe and plot enlargements * Identify ad draw similar shapes * Calculate the area and circumference of a circle * Recognise and set up linear ad special sequences   **Key knowledge:**   * Know how to enlarge shapes * Know how to recognise and draw similar shapes * Know how to work out the area and circumference of a circle * Know how to work out the nth term of a liner and special sequence | **Key skills and knowledge assessed:**  **Key Skills:**   * Calculate the size of exterior/interior angles in a regular polygon and solve problems using angles in polygons. * Draw quadratic graphs and graphs of real life situations   **Key Knowledge**   * know that exterior angles of a polygon add up to 360o * Know that interior angles of a polygon add up to 180o * know how to find the angle sum of any polygon * Know how to plot quadratic and cubic graphs |
| **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Shape-Perimeter  Coordinates / straight line  Probability  Algebra | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Draw Linear Graphs  Multiply and Divide by powers of 10  Expanding and solving algebra  Standard Form | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Fractions, Decimals and Percentages  Angles in Parallel Lines  Pie Charts  2D representation of 3D shapes | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Properties of Shapes  Set and Solve Linear Equations  Using Mixed Fractions  Perimeter and Compound Shapes  Surface Area of 3D Shapes | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Multiplying / Dividing Mixed Fractions  Probability  Plotting Quadratic Graphs | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Transformations-Enlargements  Area and Circumference of a Circle  Linear and Special Sequences |
| **Key skills and knowledge assessed:**  **Key Skills**   * Draw Linear Graphs * Expand and simplify algebraic expressions * Understand units of measurement   an initial number   * Calculate angles and perimeter   **Key Knowledge**   * Know how to set up the axis for graphs * Know how to manipulate algebra * Know the names and basic properties of special triangles and quadrilaterals | **Key skills and knowledge assessed:**  **Key Skills**   * Draw linear graphs * Multiply and divide by powers of ten (Inc Decimals) * Understand and use place value to multiply decimals * Factorise an expression by taking out common factors * Expand and solve with a bracket * Calculate in standard form – with and without a calculator. Convert numbers into standard form and vice versa   **Key knowledge**:   * Know how to set up the axis for graphs * Know the process of multiplying and dividing by powers of ten * Know and use the number system to solve problems * Know how to use place value multiply decimals * Know how to interpret a calculator display when working with standard form | **Key skills and knowledge assessed:**  **Key Skills:**   * Convert between mixed numbers and improper fractions, decimals and percentages * Use angle facts for angles on parallel lines. * Interpret and construct pie charts * 2-D representations of 3-D shapes   **Key knowledge:**   * Know percentage and decimal equivalents with a denominator of 2, 3, 4, 5, 8 and 10 * know how to identify parallel and know exterior and perpendicular lines * Know how to create and use pie charts * Know how to represent 2-D on 3-D shapes | **Key skills and knowledge assessed:**  **Key Skills:**   * Properties of triangles and quadrilaterals * Set up, solve and interpret linear equations * Solve more complex linear equations * Add, subtract, with fractions and mixed numbers * Solve problems using the perimeter/ area of compound or more complicated shapes * Work out the surface area/ volume of cuboids in context * Work out the surface area/ volume of cylinders, pyramids, spheres, hemispheres, cones and prisms   **Key knowledge:**   * Know how to set, solve and interpret linear equations * Know how to solve more complex equations * Know how + - fractions * Know how to identify the formulae required to find the area/perimeter of compound shapes and reverse processes * Know how to find the surface area of shapes * Know the formula for the volume of a cuboid * know that volume of a prism = area of face x depth | **Key skills and knowledge assessed:**  **Key Skills:**   * Multiply fractions with mixed numbers * Calculate probabilities from dependent or independent events * Draw quadratic graphs   **Key knowledge:**   * Know how to multiply fractions * know that the sum of probabilities for a single event is 1 * Know how to plot quadratic and cubic graphs | **Key skills and knowledge assessed:**  **Key Skills:**   * Transformations, describe and plot enlargements * Identify ad draw similar shapes * Calculate the area and circumference of a circle * Recognise and set up linear and special sequences   **Key knowledge:**   * Know how to enlarge shapes * Know how to recognise and draw similar shapes * Know how to work out the area and circumference of a circle * Know how to work out the nth term of a liner and special sequence |
| **Meaningful homeworks:**  **Mathswatch**  Topics from Summer year 8 | **Meaningful homeworks:**  **Mathswatch**  Topics from Autumn 1 | **Meaningful homeworks:**  **Mathswatch**  Topics from Autumn 2 | **Meaningful homeworks:**  **Mathswatch**  Topics from Spring 1 | **Meaningful homeworks:**  **Mathswatch**  Topics from Spring 2 | **Meaningful homeworks:**  **Mathswatch**  Topics from Summer 1 |