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|  | **Half term points** | | | | | |
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| **AUTUMN 1** | **AUTUMN 2** | **SPRING 1** | **SPRING 2** | **SUMMER 1** | **SUMMER 2** |
| N1.2 N1.7 Order of operations  A2.3 Linear sequences  GM2.6 Types of quadrilateral  GM2.7 Angles and parallel lines  **Hot assessments per topic – 10 questions** | A1.5 Setting up and solving simple equations  A1.6 Using brackets  SP2.6 Scatter diagrams  N4.4 Adding and subtracting fractions  N4.5 Working with mixed numbers  N4.6 Dividing fractions  **Hot assessments per topic – 10 questions** | A3.2 Plotting graphs of linear functions  N1.8 Multiplying decimals  N1.9 Dividing decimals  GM1.8 Bearings  GM3.3 Circumference  **Hot assessments per topic – 10 questions** | A1.7 Working with more complex equations  A1.8 Solving equations with brackets  SP4.3 Combined events  N6.1 Understanding ratio notation  N6.2 Sharing in a given ratio  N6.3 Working with proportional quantities  GM1.7 Metric-imperial conversions  GM1.9 Scale drawing  GM5.6 Enlargement  **Hot assessments per topic – 10 questions** | N7.4 Index notation  A2.4 Special sequences  GM6.3 Volume and surface area of cuboids  **Hot assessments per topic – 10 questions** | A4.1 Trial and improvement  S3.2 Designing a questionnaire  S1.4 Using grouped frequency tables  S2.5 Displaying grouped data  N5.4 Applying percentage increases and decreases to amounts  GM6.4 2-D representations of 3-D shapes  **Hot assessments per topic – 10 questions** |
| **Key skills and knowledge assessed:**  Key Skills:   * Work out the nth term of an arithmetic sequence * Continue special sequences * Use facts for angles in parallel lines * Apply the four operatins with negatives * Apply BIDMAS   Key Knowledge:   * Know how to use the rules for special sequences * Know how to identify alternate and corresponding angles * Know how to find the nth term rule of a linear sequence * Know that vertically opposite angles are equal | **Key skills and knowledge assessed:**  Key Skills   * Calculate fractions of amounts * Expand single brackets * Solve linear equations * Use simple formulae * Convert between mixed number and improper fractions * Plot and use scatter graphs identifying correlation * Apply the four operations to fractions   Key knowledge   * Know how to expand single brackets * Know how to simplify expressions * Know that correlation does not necessarily imply causality * Know how to convert improper fractions and mixed numbers | **Key skills and knowledge assessed:**  Key Skills:   * Plot linear graphs * Substitute numbers into formulae * Bearings * Angles in parallel lines * Money questions with and without a calculator * Understand and use place value to the four operations with decimals   Key knowledge:   * Know how to plot linear graphs * Know bearings are measured clockwise from the north line * Know how to use place value with the four operations * Know how to apply the four operations with decimals | Key skills and knowledge assessed:  Key Skills:   * Expanding double brackets * Ratio when given a part or a total amount * Set up and solve linear equations * Solve more complex linear equations * Plot enlargements * Use a sample space diagram   Key knowledge:   * Know how to expand and simplify * Know how to use ratio to solve problems * Know that finding the value for each single part in a ratio can lead to finding other parts | Key skills and knowledge assessed:  Key Skills:   * 2D representations of 3D shapes * Calculate surface area and volume of cuboids * Continue special sequences e.g. Fibonacci * Calculate with roots and integer indices   Key knowledge:   * Know the square numbers * Know the cube numbers * Know that the volume of a prism = cross section x depth * Know how to name a 3D shape e.g. prism vs pyramid * Know the meaning of faces, vertices, edges | Key skills and knowledge assessed:  Key Skills:   * 2D representations of 3D shapes * Percentage of amounts * Work out a percentage increase or decrease using a multiplier * Find averages from grouped data * Complete or construct a frequency table   Key knowledge:   * Know how to find averages from grouped data * Know how to identify the mode, median and range from a frequency table |
| **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Ratio,  simplest form,  fractions,  linear sequenes,  nth term,  circumference,  fractions of amounts, proportion,  identifying quadrilaterals, rounding ,  metric to imperial conversions | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Lowest Common Multiple,  types of triangles ,  labelling conventions,  BIDMAS,  identifying 2D shapes,  identifying quadrilaterals  angles in parallel lines | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Algebraic geometric applications  Area  Solving linear equations  Converting metric units of measure  Scatter graphs  Ratio  Fractions word problems | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Bearings enrichment task | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Volume,  Surface area  Cubes  Cuboids  Powers and square roots, Uncommon sequences (finding terms)  Bearings | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Questionnaires  trial and improvement  percentage change  VAT  Reverse percentages  Grouped frequency & averages  Finding missing terms of uncommon sequences  Fractions of amounts. |
| Key skills and knowledge assessed:  Key Skills   * Apply a formula to find the circumference Simplify ratio  Find the ratio of an amount, 2 or 3 parts * Properties of triangles and quadrilaterals   Key knowledge:   * Know the process to share when given a ratio Know that circumference = 2πr = πD Know how to simplify ratio * Know how to identify and use properties of triangles and quadrilaterals | Key skills and knowledge assessed:  Key Skills:   * Work out the nth term of an AP * Use angle facts for angles on parallel lines. Understand and use geometric notation for labelling angles, lengths, equal lengths, and parallel lines * Identify parallel lines * Apply the order of operation on multistep problem to solve questions (including brackets) * Apply the BIDMAS convention   Key knowledge:   * Know how to find the nth term of a linear sequence e.g. 2n+3 * Know how to identify parallel and know exterior and perpendicular lines * Know how to use geometric notation on parallel lines Know how to identify alternate and corresponding angles Know how to solve complex order of operations | Key skills and knowledge assessed:  **Key Skills:**   * Factorise/ simplify harder expressions and solve more difficult equations * Plot and use scatter graph * Add, subtract, with fractions and mixed numbers * Multiply and divide fractions with mixed numbers   Key knowledge:   * Know the process to solve equations * Know how to divide linear equations by common factors * Know how to create, use and draw the line of best fit * Know how to multiply and divide fractions | Key skills and knowledge assessed:  Key Skills   * Solve problems using bearings   Key Knowledge   * know how to measure and write bearings | Key skills and knowledge assessed:  Key Skills:   * Solve problems using bearings * Work out the surface area/ volume of cuboids in context * Simplify algebraic expressions, including those involving powers and surds   Key knowledge:   * know how to measure and write bearings * know that volume of a prism = area of face x depth * Know how to find the surface area of shapes * Know how to collect like terms when working with expressions | Key skills and knowledge assessed:  Key Skills   * Use trial and improvement to estimate solutions of equations * Calculate averages from a frequency table, including estimates from grouped data * Work out a percentage inc/ dec and repeated change using an multiplier * Calculate reverse percentages * Add, subtract, multiply and divide with fractions and mixed numbers * Work out the nth term of an AP   Key knowledge:   * Know how + - / \* fractions * Know how to find the nth term of a linear sequence e.g. 2n+3 * Know how to estimate solutions by using trial and improvement * Know how to find averages from grouped data * Know how to estimate solutions by using trial and improvement * Know how to find averages from grouped data |
| **Meaningful homeworks:**  **Mathswatch**  **Topics from**  **Summer 2 year 7** | **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** |