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|  | **Half term points** | | | | | |
| **8F** | | | | | |
| **AUTUMN 1** | **AUTUMN 2** | **SPRING 1** | **SPRING 2** | **SUMMER 1** | **SUMMER 2** |
| N1.2 Multiplying whole numbers  N2.2 Writing and ordering decimals  N2.3 Multiplying and dividing by powers of 10  N3.2 Rounding larger numbers  N7.2 Factors, primes and powers  GM2.3 Angle facts  **Hot assessments per topic – 10 questions** | A1.1 Making and using word formulae  SP2.3 Vertical line charts  SP2.4 Pie charts  N4.2 Finding equivalent fractions  N1.4 Dividing whole numbers  N7.3 Divisibility tests  GM6.1 Properties of 3-D shapes  GM6.2 Understanding nets  **Hot assessments per topic – 10 questions** | A1.2 Using letters  N1.3 Adding and subtracting decimals  GM1.5 Interpreting scales  N3.3 Rounding to the nearest integer  **Hot assessments per topic – 10 questions** | A1.3 Combining variables  N4.2 Finding equivalent fractions  GM1.6 The metric system  N6.1 Understanding ratio notation  GM5.2 Cartesian coordinates in four quadrants  GM5.3 Translation  **Hot assessments per topic – 10 questions** | N7.2 Factors, primes and powers  N7.4 Index notation  N1.5 Adding and subtracting negative numbers  A1.4 Working with formulae  A2.2 Generating sequences  GM3.1 Understanding area  GM6.1 Properties of 3-D shapes  **Hot assessments per topic – 10 questions** | A1.5 Setting up and solving simple equations  SP1.1 Mode, median and range  SP1.2 Using mean, median, mode and range  SP2.2 Stem and leaf diagrams  N5.1 Understanding and using percentages  N5.2 Calculating percentages of quantities  GM2.4 Rotational symmetry  GM6.2 Understanding nets  **Hot assessments per topic – 10 questions** |
| **Key skills and knowledge assessed:**  Key Skills:   * Multiplying and dividing by powers of ten * Rounding * Solve problems using factors/multiples/primes/HCF/LCM. * Identify multiples, factors and powers * Use positive integer powers and associated real roots * Identify multiples, factors and powers * Understand and use place value to add/subtract/multiply and divide integers (both positive and negative) a using mental and written methods * Problem solve problems using symmetry/angle * circumference of circles * Simplify ratio * Multiplying and dividing by powers of ten   Knowledge   * Know how to multiply and divide numbers * Know a factor is a number that goes into a number * Know how to use powers and roots * Know how to use coordinates to solve problems * Know the first 6 cube numbers and corresponding roots * Know the first 12 triangular numbers * Know the first 15 square numbers and corresponding roots * Know how to multiply and divide using negatives * Know how to identify and use lines of symmetry * Know how to simplify ratio * Know the process of multiplying and dividing by powers of ten | **Key skills and knowledge assessed:**  Key Skills:   * Substitute numbers into formulae * Change the subject * Simplify fractions * Identify Equivalent fractions * Identify 3d shapes by their properties * Interpret and construct pie charts * Simplify fractions * Identify Equivalent fractions * Solve problems using factors/multiples/primes * Identify multiples, factors and powers * Use positive integer powers and associated real roots * Identify multiples, factors and powers * Understand and use place value to add/subtract/multiply and divide integers (both positive and negative) a using mental and written methods   Knowledge   * Know how to substitute letters for numbers to find answers * Know how to cancel fractions * Know how to name a 3D shape from the base as a prism or pyramid * Know how to create and use pie charts * Know how to cancel fractions * Know how to decipher the scales within context * Know a factor is a number that goes into a number * Know how to use powers and roots * Know how to use coordinates to solve problems * Know the first 6 cube numbers and corresponding roots * Know the first 12 triangular numbers * Know the first 15 square numbers and corresponding roots * Know how to multiply and divide using negatives | **Key skills and knowledge assessed:**  Key Skills:   * Use formulae expressed in words/ letters * Round numbers to a given DP * Round numbers to the nearest whole number, 10, 100 or 1000 Use a range of measuring scales. * Problem solve problems using symmetry/angle * Interpret and construct pie charts * Substitute numbers into formulae * Use formulae expressed in words/ letters * Change the subject * Simplify ratio   Knowledge   * Know how to identify formulae from given text * Know how to round to decimal places know how to round to 1 dp * Know how to round to nearest 10, 100, 1000 * Know how to identify and use lines of symmetry * Know how to create and use pie charts * Know how to substitute letters for numbers to find answers * Know how to identify formulae from given text | **Key skills and knowledge assessed:**  Key Skills:   * Transformations, describe and plot translations * Use coordinates for direction * Problem solve using coordinates * Convert between metric units. * Use formulae expressed in words/ letters * Round numbers to a given DP * Round numbers to the nearest whole number, 10, 100 or 1000 * Use a range of measuring scales. * Use formulae expressed in words/ letters * Round numbers to a given DP * Round numbers to the nearest whole number, 10, 100 or 1000 * Use a range of measuring scales.   Knowledge:   * Know how to translate shapes * Know how to describe transformations * Know how to use coordinates to solve problems * Know how to convert metric units e.g. mm -cm-m-km and reverse * Know how to identify formulae from given text * Know how to round to decimal places know how to round to 1 dp * Know how to round to nearest 10, 100, 1000 * Know how to decipher the scales within context | **Key skills and knowledge assessed:**  Key Skills:   * Generate sequences * Apply the four operations with negative numbers * Calculate the area of shapes e.g. rectangle, triangle * Identify 3d shapes and their properties, faces, vertices, edges * Substitute numbers into formulae * Transformations, describe and plot translations   Knowledge:   * Know how to identify and generate term to term sequences * Know how to use the four operation when working with negatives * Know the formula for the area of a rectangle * Know the formula for the area of a triangle * Know how to name a 3D shape * Know the names of 3d shapes * Know the difference between 2 and 3d shapes * Know how to translate shapes * Know how to describe transformations | Key skills and knowledge assessed:  Key Skills:   * Find averages, mode, median, mean, range * Write a quantity as a fraction or percentage of another * Use multiplicative reasoning to interpret percentage * Identify the order of rotational symmetry * Create and use stem and leaf diagrams * Problem solve problems using symmetry/angle * Simplify fractions * Identify Equivalent fractions   Knowledge:   * Know how to present data in a stem and leaf * Know how to calculate the range * Know how to calculate the median * Know how to calculate the median and mode/modal from data set * Know how to calculate the mean * Know that a percentage is out of 100 and how to find a % of an amount * Know how to find and identify the order or rotational symmetry * Know how to identify and use lines of symmetry * Know how to cancel fractions |
| **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Dividing into ratio amounts  Sequences (term to term)  Quadrilaterals | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Ratio  Multiples / LCM  Factors  Indices and roots  Sequences  Coordinates  Negative numbers | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Ratio  Pie Charts  Worded Formula  Common Shapes  Algebra | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Ratio  Worded formula  Variables  Negative Numbers  Rounding  Coordinates  Translations | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Ratio  Sequences term to term / nth term  3D shape properties  Worded formula | **Meaningful homeworks:**  **Paper-based task on current and previous topics**  Ratio  FDP  Percentage increase  Frequency Tables  Number system  Circumference  Line symmetry |
| **Key skills and knowledge assessed:**  Key Skills   * Simplify ratio * Generate sequences * Know the names and basic properties of special triangles and quadrilaterals * Generate sequences by term-to-term rule given an initial number * Simplify ratio   Knowledge:   * Know how to identify and generate term to term sequences * Know the names and basic properties of special triangles and quadrilaterals | **Key skills and knowledge assessed:**  Key Skills   * Solve problems using multiples including addition and subtraction * Solve problems using factors/multiples/primes/HCF/LCM. * Identify multiples, factors and powers * Use positive integer powers and associated real roots * Generate sequences by term-to-term rule given an initial number   Knowledge:   * Know the first 6 cube numbers and corresponding roots * Know the first 12 triangular numbers * Know the first 15 square numbers and corresponding roots * Know how to multiply and divide using negatives | **Key skills and knowledge assessed:**  Key Skills   * Use formulae expressed in words/ letters * Calculate the area of shapes e.g. rectangle, triangle * Identify 3d shapes and their properties, faces, vertices, edges * Substitute numbers into formulae * Change the subject   Knowledge:   * Know the names and basic properties of special triangles and quadrilaterals * Know how to create and use pie charts * Know how to substitute letters for numbers to find answers * Know how to create and use pie charts * Know how to identify formulae from given text | **Key skills and knowledge assessed:**  Key Skills   * Know how to use coordinates to solve problems * Transformations, describe and plot translations * Use coordinates for direction * Problem solve using coordinates * Simplify ratio * Round numbers to a given DP * Round numbers to the nearest whole number, 10, 100 or 1000 * Understand and use place value to add/subtract/multiply and divide integers (both positive and negative) a using mental and written methods   Knowledge:   * Know how to use a 1:n ratio to convert money in both directions * Substitute numbers into formulae * Change the subject * Know how to describe transformations * Know how to round to nearest 10, 100, 1000 * Know how to multiply and divide using negatives | **Key skills and knowledge assessed:**  Key Skills:   * Simplify ratio * Identify 3d shapes by their properties * Substitute numbers into formulae   Knowledge:   * Know how to name a 3D shape * Know how to identify and generate term to term sequences * Generate sequences * Know how to name a 3D shape from the base as a prism or pyramid * Know how to substitute letters for numbers to find answers * Know how to simplify ratio | **Key skills and knowledge assessed:**  Key Skills:   * Simplify ratio * Simplify fractions * Identify Equivalent fractions * circumference of circles * Problem solve problems using symmetry/angle   Knowledge:   * Know a factor is a number that goes into a number * Know how to multiply and divide numbers * Know how to cancel fractions * Know how to identify and use lines of symmetry * Know how to present data in a stem and leaf * Know how to calculate the range * Know how to calculate the median * Know how to calculate the median and mode/modal from data set * Know how to calculate the mean |
| **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** |