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| Subject | Year 8 Thresholds Concepts – Autumn Term | How to support students learning |
| Mathematics | **Negative numbers - Recap from Year 7**   * Ordering negative numbers - M527 * Adding and subtracting negative numbers - M106 * Multiplying and dividing negative numbers - M288   **Decimals - Recap from Year 7**   * Rounding integers - M111 * Rounding decimals - M431 * Adding decimals - M429 * Subtracting decimals - M152 * Using a written method to multiply decimals - M803 * Using a written method to divide by decimals - M491   **Multiples, Factors and Primes - Recap from Year 7**   * Finding the lowest common multiple - M227 * Finding factors and using divisibility tests - M823 * Finding the highest common factor - M698 * Finding prime numbers - M322 * Prime factor decomposition - M108   **Algebra**   * Simplifying expressions by collecting like term - M795, M531, M949 * Multiplying and dividing terms (look at the index rules with positive and negative indices) - M120 * Expanding single brackets - M237, M792 * Factorising into single brackets - M100 * Substitution - M327, M979 * Solving equations of the form (x+a)/b=c - M401 * Solving linear equations with brackets - M902 * Solving equations with unknowns on both sides - M554 * Solving equations with the unknown in the denominator - M387 * Constructing and solving equations - M957   **Sequences**   * Term-to term rules for numerical sequences - M381 * Term-to-term rules for sequences of patterns - M241 * Substituting into position to term rules - M166 * Position-to-term rules for arithmetic sequences - M991 * Position-to-term rules for sequences of patterns - M866   **Area**   * Finding the area of parallelograms - M291 * Finding the area of trapeziums - M705 * Identifying parts of circles - M595 * Finding the circumference of circles - M169 * Finding the area of circles - M231 * Converting units of area - M728   **Fractions - Recap from Year 7**   * Converting between fractions, decimals and percentages - M264 * Fractions of amounts without a calculator - M695 * Fractions of amounts with a calculator - M684   **Percentages**   * Finding percentages of amounts without a calculator - M437 * Finding percentages of amounts with a calculator - M905 * Percentage change without a calculator - M476 * Percentage change with a calculator - M533 * Value for money - M681   **Ratio**   * Writing and simplifying ratios - M885 * Writing ratios in the form 1:n - M543 * Converting between ratios, fractions and percentages - M267 * Using equivalent ratios to find unknown amounts - M801 * Sharing amounts into a given ratio - M525 * Drawing and interpreting scale diagrams - M112   **Rounding & Estimating**   * Rounding integers using significant figures - M994 * Rounding decimals using significant figures - M131 * Estimating calculations - M878   **C-ordinates**   * Calculating midpoints - M622 * Mixed problems: Coordinates and midpoints - M311   **Standard Form**   * Using standard form with positive indices - M719 * Using standard form with negative indices - M678 | * Encourage your child to practise their times tables up to 15 at home. * Encourage your child to set their work out using the correct columns for place value. * Encourage your child to estimate answers by rounding e.g. shopping costs by rounding to the nearest £. * Encourage your child to look at where they may use negative numbers in real life. * Homework will be set on Sparx – teachers will provide your child with a login and password. Use the Sparx codes provided next to the concepts to support them when required. |