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| **Subject** | **Year 9 Threshold Concepts – Autumn Term** | **How to support students’ learning** |
| Mathematics | **Number operations and Integers**   * Multiplication and division * Factors and multiples * Highest common factor and lowest common multiple * BIDMAS     **Ratio and Proportion**   * Simplify ratio * Divide in a given ratio * Solve ratio and proportion problems     **Algebraic expressions**   * Understand and use algebraic notation * Simplify expressions * Expand and factorise * Expand double brackets   **Sequences**   * Using term to term rules * Finding the nth term for a linear sequence * Finding the nth term for a quadratic sequence (Higher tier only) * Use sequence notation     **Fractions and Decimals**   * Decimal addition/subtraction/multiplication/division * Decimal places and significant figures * Simplifying fractions * Adding and subtracting fractions * Multiplying and dividing fractions * Convert between fractions, decimals and percentages * Convert a recurring decimal to a fraction (Higher tier only)   **Angles**   * Use basic angle rules to solve problems * Learn rules for angles and parallel lines | * Encourage your child to practise their times tables up to 15 at home. * When completing homework check that your child is showing all their working out and setting their work out correctly. * Use [www.sparx.com](https://sparxmaths.com/)for support if needed. Teachers will have provided your child with a login and password. * Discuss with your child occasions where ratio /proportion are used eg recipes, currency exchange, scale models      * Encourage your child to look back at the algebra work they did in Year 8        * Use [www.sparx.com](https://sparxmaths.com/)for support if needed. Teachers will have provided your child with a login and password.      * Encourage your child to look back at the fractions and decimals work they did in Year 8 * Discuss with them situations where numbers have been rounded eg football crowds, newspaper headlines |