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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

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 * 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

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