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| **Subject**  | **Year 10 Higher Threshold Concepts – Summer Term**  | **How to support students’ learning**  |
| Mathematics  | **Surds*** Multiply and divide surds
* Simplify surds
* Add and subtract surds
* Expand brackets with surds
* Rationalise the denominator containing a single term
* Rationalise the denominator containing two terms

**Compound Units*** Convert standard units
* Convert compound units
* Convert standard units in algebraic contexts
* Convert standard units in algebraic contexts

**Angles in Polygons and Circle Theorems*** Calculate angles in polygons
* Calculate angles subtended at the centre or circumference of a circle
* Calculate angles in segments and cyclic quadrilaterals
* Use circle theorems for chords and tangents
* Use the alternate segment theorem

**Trigonometry*** Use the sine rule
* Use the area rule
* Use the cosine rule

**Probability*** Create and interpret tree diagrams for independent events
* Create and interpret tree diagrams for dependent events
* Calculate conditional probabilities from tree diagrams

**Financial Capabilities*** Understand basic tax calculations and payslips
* Understand how to budget, and the terms income and expenditure
* Use basic money management skills including getting a mortgage
 | * Encourage your child to review their knowledge of factors, square numbers up to 225 (152) and fraction calculations
* Encourage your child to have the correct equipment for lessons, e.g. a calculator
* 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 show all their working out. If they have homework online, then encourage them to write down all their working out in their exercise books
* Encourage your child to think about units when talking about weight, distance and speeds
* Encourage your child to have the correct equipment for lessons, e.g. a calculator
* 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 show all their working out. If they have homework online, then encourage them to write down all their working out in their exercise books
* Encourage your child to learn the rules associated with the angle facts taught in lessons
* Encourage your child to have the correct equipment for lessons, e.g. a pencil, ruler, protractor, calculator
* 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 show all their working out. If they have homework online, then encourage them to write down all their working out in their exercise books
* Encourage your child to look back at their notes and to learn Pythagoras’ Theorem
* Encourage your child to learn the trigonometric ratios SOHCAHTOA and the special angles
* Encourage your child to have the correct equipment for lessons, e.g. a calculator
* 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 show all their working out. If they have homework online, then encourage them to write down all their working out in their exercise books
* Encourage your child to review their prior knowledge of probability and calculations with fractions and decimals
* Discuss real-life applications of probability, e.g. weather forecasting, financial investment and everyday decision making
* Encourage your child to have the correct equipment for lessons, e.g. a pencil, ruler, calculator
* 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 show all their working out. If they have homework online, then encourage them to write down all their working out in their exercise books
* Encourage your child to review their knowledge of percentage calculations
* Discuss scenarios which incorporate tax, e.g. VAT calculations in weekly shopping, your jobs and payslips and how income tax and national insurance is calculated
* Have discussions with your child around your own knowledge of purchasing a house
* Encourage your child to have the correct equipment for lessons, e.g. a calculator
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