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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 |