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| **Subject**  | **Year 10 Foundation Threshold Concepts – Spring Term**  | **How to support students’ learning**  |
| Mathematics  | **Geometric Constructions and Calculations*** Calculate angles on a line and about a point
* Calculate vertically opposite angles
* Calculate angles in a triangle
* Calculate angles in quadrilaterals
* Use line and shape properties
* Combine angle facts
* Calculate angles on parallel lines
* Use quadrilateral properties to find angles

**Direct and Inverse Proportion*** Write and simplify ratio
* Share amounts in a given ratio
* Solve direct proportion word problems
* Interpret and construct direct proportion equations
* Understand graphs of direct proportion
* Solve inverse proportion word problems
* Interpret and construct inverse proportion equations
* Understand graphs of inverse proportion

**Percentage Change*** Convert between fractions, decimals and percentages
* Find percentages of amounts with and without a calculator
* Calculate percentage change with and without a calculator
* Find original values in percentage calculations
* Perform compound interest calculations

**Real-Life Graphs*** Plot and interpret real-life graphs, including distance-time graphs

**Equations and Inequalities*** Solve equations with two or more steps
* Solve equations with the unknown on both sides
* Construct and solve equations
* Factorise to solve quadratic equations
* Solve simultaneous equations
* Construct and solve simultaneous equations
* Read and draw inequalities on number lines
* Solve single inequalities
* Solve inequalities with unknowns on both sides
* Solve double inequalities
* Construct and solve inequalities
 | * 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 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 at real-life graphs and tables of data
* Encourage your child to show clear working out as the find the constant of proportionality
* Discuss real-life applications of ratio and proportion, e.g. baking and currency exchange (direct proportion), the fact it takes longer for 2 people to paint the same fence than 3 people (indirect proportion)
* 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 use a multiplier when solving percentage problems
* Discuss real-life percentage problems, e.g. discounts, interest rates, tax etc
* 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 planning trips and journeys to see these in real-life
* 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 practise their algebra skills, order of operations knowledge (BIDMAS) and multiples of factors of numbers
* 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

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