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| **What will we be learning?*****Geometry:*** Trigonometry recap and extensionSine and cosine rules | **Why this? Why now?**These topics are a recap and extension of the Pythagoras and Trigonometry skills covered previously and extends in order to be able to solve more complex problems, including proof.All of these skills are then revisited and extended in the A level Mathematics syllabus. | **Key Words:**PythagorasTrigonometryOppositeHypotenuseAdjacentSineCosineTangentSimilarCongruent |
| **What will we learn?*** ­Know and apply Pythagoras’ Theorem including in 3D
* Know and apply the trigonometric ratios including in 3D
* Know the exact trigonometric values
* Apply angle facts, similarity, congruence and properties of quadrilaterals to conjecture and derive results about angles and sides including Pythagoras’ Theorem
* Compare lengths using ratio notation and make links to trigonometric ratios
* Know and apply the Sine rule to find unknown lengths and angles
* Know and apply the Cosine rule to find unknown lengths and angles
* Know and apply the formula for a non-right angled triangle to calculate the area, sides or angles of any triangle
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| **What opportunities are there for wider study?****Dr Frost Maths** is the primary resource that we use for homestudies and it has lots of useful revision tools. Alongside this, you can search for a specific topic and you can either practise some questions online, or watch a video. Under the resources section, there is also a “Full Coverage” document for some topics that have a huge bank of exam questions on the topic in question. <https://www.drfrostmaths.com/course.php?sid=-10> **Corbett Maths -** video links as well as Practice Questions and Textbook Exercises and answers available. <https://corbettmaths.com/contents/> **MathsGenie -** website that has videos and exam questions (along with worked solutions). <https://www.mathsgenie.co.uk/advance-information.html>**Careers Link**Pythagoras and trigonometry are used in constructionThe dangerous ratio: <https://nrich.maths.org/2671> |
| **How will I be assessed?**Year 11 mocks – 2 full papers, one non-calculator and one calculatorHomestudy tasks – split between written exam questions and Dr Frost retrieval practice tasksQuality of classwork |