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| **What will we be learning?**Algebra recap & extensionGraphs recap & extensionReal life graphs | **Why this? Why now?**Algebra Graphs and real life graphs builds on knowledge gained in key stage 3 and builds towards an ability to solve GCSE questions involving these topics. | **Key Words:**ExpressionsEquationsFormulaeIdentitiesInequalitiesTermsFactorsSurdsbracketparallelgradientreciprocal |
| **What will we learn?*** Understand and use the concepts and vocabulary of expressions, equations, formulae, identities, inequalities, terms and factors (review of Year 9)
* Simplify and manipulate algebraic expressions (including those involving surds) by:
	+ collecting like terms
	+ multiplying a single term over a bracket
* taking out common factors
* Deduce expressions to calculate the nth term of a linear sequence
* Solve linear equations in one unknown algebraically including those with the unknown on both sides of the equation (review of Year 9)
* Solve geometrical problems on co-ordinate axes
* Use the form http://aqamaths.aqa.org.uk/custom_content/8300_Foundation_images/coordinates_and_linear_graphs/y=mx+c%202nd.jpg to identify parallel lines
* Find the equation of the line through two given points, or through one point with a given gradient
* Identify and interpret gradients and intercepts of linear functions graphically and algebraically
* Plot and interpret graphs (including reciprocal graphs) and graphs of non-standard functions in real contexts, to find approximate solutions to problems such as simple kinematic problems involving distance, speed and acceleration
* Interpret the gradient of a straight-line graph as a rate of change
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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](https://www.drfrostmaths.com/course.php?sid=-10%E2%80%AF%E2%80%AF)  **Corbett Maths -** video links as well as Practice Questions and Textbook Exercises and answers available.   [https://corbettmaths.com/contents/](https://corbettmaths.com/contents/%E2%80%AF)  **MathsGenie -** website that has videos and exam questions (along with worked solutions).   <https://www.mathsgenie.co.uk/advance-information.html>   Careers linkMaths teacher, Accountant |
| **How will I be assessed?** Half term assessments Homestudy tasks Quality of classwork  |