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| **What will we be learning?**  Algebra recap & extension  Graphs recap & extension  Real 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:**  Expressions  Equations  Formulae  Identities  Inequalities  Terms  Factors  Surds  bracket  parallel  gradient  reciprocal |
| **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 | |
| **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 link  Maths teacher, Accountant | |
| **How will I be assessed?**  Half term assessments  Homestudy tasks  Quality of classwork | |