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**Knowledge Rich Curriculum Plan**

Year 11 Higher – Algebra 2



| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| --- | --- | --- | --- | --- |
| **To learn how to find the equation of a straight line** | * Students will know how to find the equation of a given straight line and write it in the form y = mx + c
* Students will know how to find the gradient and y-intercept for a straight line representing a real-life situation and exp
 |  | * Students will need to know how to calculate gradient between two coordinates
 | Exam Prep 3 |
| **To learn how to find the equation of a straight line from coordinates and find the equation of parallel lines** | * Students will know how to determine the equation of a straight line from two pairs of coordinates
* Students will know that parallel lines have the same gradient
* Students will know how to find the equation of a straight line that is parallel to another given line
* Students will know how to solve more complex problems involving parallel lines
 | **Parallel –** parallel lines are two lines that are side by side and have the same distance continuously between them. | * Students will need to know how to calculate gradient
* Students will need to know how to solve linear equations in the form a + x = c where a and c are integers or fractions
 | Exam Prep 3 |
| **To learn how to find the equation of perpendicular lines** | * Students will know that the gradients of two perpendicular lines are negative reciprocals of one another
* Students will know how to find the equation a straight line that is perpendicular to another given line
* Students will know how to solve more complex problems involving perpendicular lines
 | **Perpendicular –** at a right angle to**Reciprocal** – The reciprocal of a number is 1 divided by the number | * Students will need to know how to find the reciprocal of an integer
* Students will need to know how to find the reciprocal of a fraction
 | Exam Prep 3 |
| **To learn how to solve linear simultaneous equations**  | * Students will know how to solve linear simultaneous equations or find estimates to their solutions given two straight lines drawn on a graph
* Students will know how to solve linear simultaneous equations by drawing two straight lines and identifying the x- and y- values for the point of intersection
* Students will know how to use elimination to solve linear simultaneous equations algebraically
* Students will know how to solve linear simultaneous equations representing a real-life situation and interpret the solution in the context of the problem
 | **Simultaneous –** occurring, operating, or done at the same time.**Simultaneous equations –** equations involving two or more unknowns that are to have the same values in each equation.**Linear Equation –** an equation between two variables that can be written in the form y=mx+c. Linear equations give a straight line when plotted on a graph. | * Students will need to know how to solve linear equations
* Students will need to know how to substitute into formulae
 | Exam Prep 3 |