|  |  |  |  |
| --- | --- | --- | --- |
| **Core Knowledge Map** | | | |
| Subject: **Mathematics** | Year: 10 | | Term: Spring 2 |
| What are we learning? | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Unit 9a: Linear Graphs and Coordinate Geometry** | **Sparx IL Codes** | Sad face outline with solid fill | Nervous face outline with solid fill | Smiling face outline with solid fill | | Find the equation of a straight line from a graph in the form y = mx+c | U315 |  |  |  | | Plot and draw graphs of straight lines of the form y = mx+c with and without a table of values | U741 |  |  |  | | Interpret linear graphs in real world applications | U652,U638 U862 |  |  |  | | Identify direct proportion from a graph | U238 |  |  |  | | Use a graph to find approximate solutions to simultaneous equations | U836 |  |  |  | | Find the equation of a line given one point and the gradient or given two points on the line | U477, U848 |  |  |  | | To find the equations of parallel lines | U898 |  |  |  | | To know and use the properties of perpendicular lines, such that m1 x m2 = -1 | U898 |  |  |  | | | | |
| How will I be assessed | | | |
| Retrieval Tasks, Exit tickets, end of half-term test. | | | |
| Big questions: | | | |
| Can you….?   * Use the table function on your calculator to generate a table of values. * Write down the value of the gradient of the function given by y = 5x + 3 and 3y – 2x = -5 * Write down the value of the gradient of the line that is perpendicular to the line given by the equation y = -3x + 4 * Deduce which of these lines are parallel: y = 3x, 2y – 6x = 1, y + 3x = -5, y = 78 + 3x * State the equations of the lines which are the coordinate axes | | | |
| How does this build on previous learning? | | How will this link to my future learning? | |
| * Linear graphs of the form y = a, x = a and y = mx + c (Y8) * Plotting linear graphs (Y9) * Transformations – reflections in lines (Y10) | | * GCSE synoptic and multi-step problem solving questions. * Direct and Indirect proportion * Solving linear and non-linear simultaneous equations | |
| Core knowledge: | | Key vocabulary: | |
| Any **linear graph** can be given by an equation in the form **y = mx+ c** where m is the **gradient** of the line and c is the **y intercept.** | | Function  Gradient  y- intercept  x-intercept  Linear  Parallel  Perpendicular  Plot  Sketch | |
| Need more help? Use the Sparx Independent Learning Codes above | | | |