|  |
| --- |
| **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.**$$gradient= \frac{change in y}{change in x}= \frac{Δy}{Δx}$$ | FunctionGradienty- interceptx-interceptLinearParallelPerpendicularPlotSketch |
| Need more help? Use the Sparx Independent Learning Codes above |