

Stage 8 – Algebraic proficiency: Graphs



Know it!

Knowledge	
I know...	That graphs of functions of the form $y = mx \pm c$, $x \pm y = c$ and $ax \pm by = c$ are linear
I know...	How to plot graphs of functions of the form $y = mx \pm c$ and the form $ax \pm by = c$
I know...	How to find the gradient and y-intercept of a straight line on a unit grid and use this to sketch linear graphs
I know...	How to distinguish between a linear and quadratic graph
I know...	How to plot and interpret distance-time graphs (speed-time graphs)



Link it!

Backward	Forward
Coordinates. Lines of $x = a$ and $y = a$ Lines of $y = x$ and $y = -x$	Plotting quadratics in the form $ax^2 + bx + c$ Solving linear equations graphically



Prove it!

Show me a point on this line (e.g. $y = 2x + 1$). And another, and another ... Draw a distance-time graph of your journey to school. Explain the key features.
--

Say it!



Vocabulary	Definition
Plot	To draw on a graph.
Equation (of a graph)	An equation that defines plots of a graph. Will have a y and an x value.
Linear	An equation that makes a straight line when it is graphed. Often written in the form $y = mx + c$
Quadratic	An equation where the highest exponent of the variable (usually "x") is a square (2). So it will have something like x^2 but not x^3 etc.
Coordinate plane	A set of axis that show 'x' values and 'y' values. It is used to plot coordinates, and produce graphs.
Gradient	How steep a straight line is.
y-intercept	The point where a line or curve crosses the y-axis of a graph.

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