Topic Sequence: Graphs

1	2	3
Gradients and Lines	Non-Linear Graphs	Using Graphs

Topic Overview: Non-Linear Graphs

Students revise conversion grpahs and reflection in straight lines and also study other real-life graphs, including speed/distance/time, constructing and interpreting these. Content includes plotting and interpreting graphs of non-standard functions in real-life contexts, to find approximate solutions to problems such as simple kinematic problems involving distance, speed and acceleration.

Learning Sequence:

Reflect shapes in given lines
Students are familiar with the equations of straight lines and this step reminds about lines of the form $y = a, x = a, y = x$ in the context of practicing reflection.

Conversion graphs and other graphs
Students recap knowledge of conversion graphs such as direct proportion graphs which go through the origin and other graphs which do not and include inverse proportion graphs

Interpret and construct distance/time graphs
Students discover how the gradient of a distance/time graph represents the speed of travel and read, interpret and construct distance/time graphs.

Speed/Time graphs
Students discover how the gradient on a speed/time graph represents the acceleration and that a negative gradient now represents deceleration. The area under a graph is the distance travelled

Sequence of Learning:

1	Reflect shapes in given lines
2	Conversion graphs and other graphs
3	Interpret and construct distance/time graphs
4	Speed/time graphs

Topic Resources:

Knowledge Map:	Non-Linear Graphs quadratic and cubic
	Non-Linear Graphs other including circles
	Circles including Theorems

Assessment:

Knowledge:	End of Topic test
Application of Knowledge:	Termly summative assessment

Supportive Reading:

Any supported reading listed here	Sparx Maths www.sparxmaths.co.uk
	Corbett Maths : www.corbettmaths.com
	AQA Revision Guide