

Scheme of Learning: Year 9 Summer Term

Topic Sequence: Representations and Revision

15	16
Probability	Algebraic Representations

Topic Overview: Solving Ratio and Proportion problems

Students extend their knowledge of graphs to look at interpretation and creation of different types of graphs. The first non-linear graph explored is the quadratic graph, where students are encouraged to look at the symmetry of the curve and read off x/y values. They also explore reciprocal and exponential graphs. Students' knowledge of straight line graphs is extended by looking at inequalities in graphical and also represented as number lines. IN addition, solution of simultaneous equations by graphical methods is also included in a Higher step.

Learning Sequence:

Draw and interpret quadratic graphs:

Students need to be confident with substituting numbers, especially negative numbers, into quadratic expressions in order to produce table of values for their own graphs. They need to produce smooth curves.

Interpret other graphs, including reciprocal and exponential:

Students need to be able to read from any graphs, including cubic, reciprocal and exponential. Students also read from other real-life graphs such as distance- time graphs

Investigate graphs of simultaneous equations (H):

Students should be aware that a single equation in two unknowns has an infinite number of possible solutions, but a pair of linear simultaneous equations have a single solution pair. Students should be aware that the solutions need not be integers and the graphical method is limited.

Representing inequalities:

Building on their knowledge of straight line graphs, students shade regions to represent given inequalities in one variable, and if appropriate, two variables. Dotted lines are used to show when borderline values are not included in the solution. Set. Students compare this to empty circles for the corresponding number line representation.

Sequence of Learning:		Topic Resources:	
1	Draw and interpret quadratic graphs:	Knowledge Maps:	Algebraic Notation Linear Graphs Non-linear Graphs Inequalities Simultaneous Equations
2	Interpret other graphs, including reciprocal and piece-wise:		Assessment
3	Investigate graphs of simultaneous equations (H):		Knowledge: End of Topic test Application of Knowledge: Termly mixed topic assessment
4	Represent inequalities	Supportive Reading:	Sparx Maths www.sparxmaths.co.uk Corbett Maths : www.corbettmaths.com AQA Revision Guide