

# Year 11 M2:Foundation Tier

## Number and Algebra Overview

### Learning Outcomes

You should be able to:

- use index notation and index laws for positive, whole number powers;
- use the concepts and vocabulary of divisor, highest common factor, least (lowest) common multiple and prime factor decomposition;
- add, subtract, multiply and divide decimals of any size;
- round to a specified or appropriate number of significant figures;
- recognise that recurring decimals are exact fractions and that some exact fractions are recurring decimals;
- add, subtract, multiply and divide fractions, including mixed numbers;
- use percentage and repeated proportional change;
- calculate with money and solve problems in a finance context, for example compound interest, insurance, taxation, mortgages and investments;
- simplify and manipulate algebraic expressions by multiplying a single term over a bracket; and
- manipulate algebraic expressions by taking out common factors that are terms.
- set up and solve linear equations in one unknown, including those with the unknown on both sides of the equation and equations of the form:  
$$x/4+3=7;$$
- find the mid-point and length of a line given in 2D co-ordinates;
- find and interpret gradients and intercepts of linear graphs, for example plot and interpret the graph of the cost of car hire at £40 per day plus a cost of 20p per mile;
- Add and subtract algebraic fraction e.g.  $2a/3 + a/4$