

| Content Area | Strand | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 |
|--------------|----------------------------|--|--|---|---|--|
| Algebra | Functions | Function machines Represent functions graphically | | | | Functions including composite and inverse |
| | Substitution | Substitute into expressions including directed number | | | | Substitute into SUVAT |
| | Notation | Algebraic notation Understand the difference between equality and equivalence | Identify and use formulae, expressions, identities and equations | Revise algebraic representation | | |
| | Fractions | Simple algebraic fractions | | | | Algebraic fractions |
| | Manipulation | Explore related algebraic expressions | Expanding and factorise single brackets | Revisit expanding a pair of binomials | Factorising quadratics with a=1 | Completing the square |
| | | Collecting like terms including directed numbers | Expand a pair of binomials Simplify expressions including brackets | | | |
| | Indices | | Rules of indices | | Work with powers and roots | |
| | Formulae | | | Change the subject of a formulae | | Revisit changing the subject of a formula including where the subject appears more than once |
| | Proof | | | Testing algebraic conjectures | | Algebraic proof |
| | Equations and Inequalities | Form and solve one and two step equations | Form and solve equations with brackets or unknowns on both sides | Form and solve equations and inequalities with unknowns on both sides | Form and solve linear and non-linear simultaneous equations | |
| | | | Solve inequalities | Representing inequalities | Representing inequalities on number lines | |
| | Quadratics | | | | Solve quadratics equations and inequalities by factorising | Revisit solving quadratic equations Solve quadratics using the formulae and completing the square |
| | Graphs | | Conversion and direct proportion graphs | Simplify, use, rearrange and interpret $y=mx+c$ | Revisit solving simultaneous equations graphically | Real life graphs including speed distance and time |
| | | | Using coordinates and plotting horizontal and vertical graphs and $y=mx+c$ | Parallel lines | | Equation of a circle and tangents to circles |
| | | | Exploring gradient | Interpret graphs in various forms including piecewise linear | | Perpendicular lines |
| | | | Exploring non-linear graphs | Solve simultaneous equations graphically | | Roots, quadratic, cubic, reciprocal and trig graphs |
| | Sequences | Recognise linear and non-linear sequences | Revisit generating sequences with more complex rules | Testing conjectures about sequences | Sequences with surds | Transforming graphs |
| | | Generate sequences from an algebraic rule | Find nth terms | Revise nth term rule | Find quadratic nth term | |