

HIGHER GCSE UNIT SUMMARY: UNIT 9: Algebra: Solving quadratic equations and inequalities, solving simultaneous equations algebraically

9a) Solving quadratics and simultaneous equations

Unit Description	Taught	Revision Priority
Factorise quadratic expressions in the form $ax^2 + bx + c$;		
Set up and solve quadratic equations;		
Solve quadratic equations by factorisation and completing the square;		
Solve quadratic equations that need rearranging;		
Solve quadratic equations by using the quadratic formula;		
Find the exact solutions of two simultaneous equations in two unknowns;		
Use elimination or substitution to solve simultaneous equations;		
Solve exactly, by elimination of an unknown, two simultaneous equations in two unknowns: linear / linear, including where both need multiplying; linear / quadratic; linear / $x^2 + y^2 = r^2$;		
Set up and solve a pair of simultaneous equations in two variables for each of the above scenarios, including to represent a situation;		
Interpret the solution in the context of the problem;		

9b) Inequalities

Unit Description	Taught	Revision Priority
Show inequalities on number lines;		
Write down whole number values that satisfy an inequality;		
Solve simple linear inequalities in one variable, and represent the solution set on a number line;		
Solve two linear inequalities in x , find the solution sets and compare them to see which value of x satisfies both solve linear inequalities in two variables algebraically;		
Use the correct notation to show inclusive and exclusive inequalities.		