

Unit 5a: Further Equations

Year 9 Road Map

In this unit you will learn about number. The aims are as follows:

LG1: Knowledge

LG2: Application

LG3: Skills

S/N	Level	Learning Goals/Outcomes/Content	Dr Frost Videos			
			R	A	G	
1	Grade 7	1. Understand the concept of a function and its representation. 2. Identify the domain and range of a function. 3. Graph a linear function and interpret the slope. 4. Solve systems of linear equations and inequalities. 5. Apply the Pythagorean theorem to solve problems. 6. Understand the properties of exponents and radicals. 7. Calculate the area and volume of geometric figures. 8. Analyze data sets and create appropriate graphs. 9. Understand the concept of probability and its applications. 10. Apply mathematical reasoning to solve real-world problems.				

5a) Further Equations

1	S	Select an expression/equation/formula/identity from a list;	190a			
2	S	Write expressions and set up simple equations;				
3	S	Use function machines;	259r			
4	S	Solve simple equations;	199a 199b 199c			
5	SC	Solve linear equations, with integer coefficients, in which the unknown appears on either side or on both sides of the equation;	257a			
6	SC	Solve linear equations which contain brackets, including those that have negative signs occurring anywhere in the equation, and those with a negative solution;	254a 254c			
7	SC	Solve linear equations in one unknown, with integer or fractional coefficients;	258			
8	SC	Substitute into a formula, and solve the resulting equation;	196c			
9	SC	Find an approximate solution to a linear equation using a graph;	257a			
10	SCE	Solve angle or perimeter problems using algebra.	259d			
11	SCE	Write an equation to solve a word problem.	339c			
12	E	Factorise quadratic expressions in the form $ax^2 + bx + c$;	362a			
13	CE	Solve quadratic equations by factorisation and completing the square;	367b 415b			
14	E	Solve quadratic equations that need rearranging;	418p			
15	E	Set up and solve quadratic equations;	417c			
16	CE	Solve quadratic equations by using the quadratic formula;	417a			
17	CE	Find the exact solutions of two simultaneous equations in two unknowns;	276a			
18	CE	Use elimination or substitution to solve simultaneous equations;	276b			
19	CE	Solve exactly, by elimination of an unknown, two simultaneous equations in two unknowns:	276d			
20	E	linear / linear, including where both need multiplying; linear / quadratic; linear / $x^2 + y^2 = r^2$;	276e			
21	CE	Interpret the solution in the context of the problem;	136e			

Student's comments and questions:

