

KS4 GCSE Foundation (Year 9)

Schemes of Work



Mathematics Department

This is a breakdown of the Year 9 Mathematics content.

To watch videos, take notes, and attempt questions on any topic:

1. Go to <https://vle.mathswatch.co.uk/vle/>
2. Log in using your personalised username and password
3. Click on "Video" in the top menu bar
4. Enter the MathsWatch clip number (as listed in the table below) into the search bar
5. Watch the video or click the yellow "Interactive Questions" button to attempt questions

TOPICS	MATHSWATCH CLIP NUMBERS	COMPLETED
UNIT 1 (Number)		
Place value and ordering integers	1, 2, 3	
Adding and subtracting integers and decimals	17, 18, 22, 21	
Multiplying integers	19	
Dividing integers	20	
BIDMAS	75	
Round to powers of 10	31, 32	
Significant figures	90	
Estimation	91	
Negative numbers (+ - × ÷)	23, 68a, 68b	
Multiplying decimals	66, 92	
Dividing decimals	67, 92	
Squares, cubes and roots (<i>including</i> estimating roots)	81	
Index notation	29, 82, 131	
Factors, multiples and primes	28	
HCF and LCM	79, 80	
Prime decomposition	78	
UNIT 2 (Algebra)		
Simplifying expressions – collecting like terms	33	
Simplifying expressions – multiplying and dividing	34, 35	
Index Notation	29, 82, 131	
Writing expressions	7	
Substitution	95	
Formulae	137, 101, 136, 190	
Expanding single brackets	93	
Expand and simplify single brackets	134a	
Factorising into single brackets	94	
Using expressions and formulae		
UNIT 3 (Graphs, tables and charts)		
Frequency Tables	130a, 130b	
Grouped frequency tables	65a, 130b	
Averages – Mode, median, mean and range	62	
Bar charts and pictograms	15, 64, 16	
Two way tables	61	
Line graphs/ Time series graph	153	
Frequency polygons	65b	
Stem and leaf diagrams	128b	
Measuring and drawing angles	46a, 46b	
Pie charts	128a	
Scatter graphs	129	
Line of best fit	129	

UNIT 4 (Fractions and percentages)		
Comparing fractions	24, 25, 26, 70,76	
Equivalent fractions	24, 25, 26, 70,76	
Adding and subtracting fractions	71	
Multiplying fractions	72, 73	
Dividing fractions	74	
Calculating with mixed numbers		
Converting fractions, decimals and percentages	84, 85, 88, 89	
Equivalent Proportion	42	
Percentages of quantities	40, 86, 87	
Increase and decrease by percentages	108, 111	
Increase and decrease by percentages (multipliers)	108	
UNIT 5 (Equations, Inequalities and sequences)		
Solving one step equations	100, 135a, 135b	
Solving two step equations	100, 135a, 135b	
Solving equations with brackets	100, 135a, 135b	
Solving equations with unknowns on both sides	100, 135a, 135b	
Inequalities on a number line		
Solving inequalities		
Substitution	95	
Changing the subject of the formulae	101, 136, 190	
Generating sequences	37	
<i>n</i> th term rule	102, 103	
UNIT 6 (Angles)		
Properties of Shapes	43	
Congruency	12	
Angles on a line and around a point	13, 45	
Angles in triangles and quadrilaterals	121, 122	
Angles in parallel lines	120	
Interior angles in polygons	10, 123	
Exterior angles in polygons	10, 123	
Angle problems with algebra		
UNIT 7 (Averages and range)		
Averages – Mode, Median & Range	62	
Averages – Mean	62	
Ungrouped frequency table	130a, 130b	
Grouped frequency table	65a, 130b	
Comparing averages		
Sampling	152, 176	

----- End of Year 9 -----