

Year 9 Weekly Topic Overview

Week	Topic	Assessment & LL's
1	F: Squares, roots and cubes Divisibility tests and prime numbers Factors, Multiples, Primes, HCF, LCM and using Venn Diagrams	
	H: Factors, Multiples, Primes, HCF, LCM and using Venn Diagrams N^{th} term formulae – linear and quadratic	
2	F: Sequences – finding and using n^{th} term rules Rules of indices	
	H: Using and finding N^{th} term formulae (linear and quadratic) Rules of indices Direct & Indirect Proportion (set 1 only).	
3	F: Averages from a list and table Stem and leaf diagrams Compare using averages	Mixed Homework sheet 2 – Learning Landmark 1
	H: Scatter graphs Averages from a list and table	Mixed Homework sheet 2 – Learning Landmark 1
4	F: Two- way tables Pie charts Scatter graphs and correlation	
	H: Stem and Leaf diagrams Compare using averages Cumulative Frequency	
5	F: Revision, assessment & response Percentage of amounts (non-calc)	Test 1 Learning Landmark 2
	H: Revision, assessment & response	Test 1 Learning Landmark 2
6	F: Scatter graphs and correlation Simplifying fractions and fractions of amounts Converting between mixed numbers and improper fractions, multiplying, dividing, adding and subtracting fractions	
	H: Box plots Recap lesson of averages, cumulative frequency and box plot Problem solving Mixed number – improper fraction with adding and subtracting fractions	
7	F: Decimal multipliers including increase and decrease Number as % of number, percentage change Compound interest and depreciation FDP conversions and ordering.	
	H: Multiplying and dividing fractions Algebraic fractions Percentages - non-calculator, decimal multiplier and increase/decrease using a multiplier	
Half Term		
8	F: Simplifying ratios and converting between a ratio and fraction Sharing in a ratio Ratio when given one value or given difference Problem solving	Mixed Homework sheet 5 – Learning Landmark 3
	H: Percentages – one number as a percentage of another, percentage change, reverse percentages and compound percentage change Simplifying and sharing in a ratio	Mixed Homework sheet 5 – Learning Landmark 3
9	F: Simplifying expressions by collecting like terms Expand single and double brackets	

	Factorising linear expressions	
	H: Ratio when given one value or given difference. Solve linear equations Simultaneous equations	
10	F: Solve simple equations, equations with unknowns on both sides and equations with brackets Substitution with positive and negative numbers	
	H: Simultaneous Equations Inequalities Change the subject of a formula Problem solving	
11	F: Revision, assessment & response Substitution involving negatives	Test 2 Learning Landmark 4
	H: Revision, assessment & response Pythagoras theorem	Test 2 Learning Landmark 4
12	F: Revision, assessment & response Angles -name, measure, estimate and draw angles, basic angle facts and angles in parallel lines.	
	H: Pythagoras theorem and Trigonometry Review angle facts and angles in parallel lines	
13	F: Angles in polygons investigation Regular polygons and calculating missing angles Compass constructions	
	H: Angles in polygons Compass constructions	
14	F: Problem solving Getting to know your calculator	
	H: Similar triangles	
Christmas		
15	F: Rounding to decimal places, sig fig and estimation Metric and imperial conversions	Spring Mixed Homework sheet 1 – Learning Landmark 5
	H: Four operations with negative numbers & substitution into a formula Intermediate maths challenge (2003)	Spring Mixed Homework sheet 1 – Learning Landmark 5
16	F: Area of basic and compound shapes Area and circumference of a circle	
	H: Rounding to decimal places, sig fig and estimation Getting to know your calculator Error bounds Converting between ordinary numbers and standard form	
17	F: Volume of cuboids and prisms Surface area Conversion between units of area and volume.	
	H: Standard form - calculations Recap negative powers and focus on fractional powers Area of triangle, parallelogram, trapezium and compound shapes Circumference and area of a circle	
18	Revision, assessment & response F: Problem solving H: Intermediate Maths Challenge 2004	Year 9 spring exam – P1 Non- calculator - Learning Landmark 6
19	F: Coordinate and coordinate problems Y= and x = lines and plotting simple equations Plotting using a table of value - gradients and intercepts	
	H: Area and perimeter of compound shapes involving circles Sector area and arc length	

	Volume of a prism Volume of a cone, pyramid and sphere (set 1&2)	
20	F: Exploring graphs on a computer Basic probability, not happening, sum to 1. Sample space diagrams Relative frequency and expected outcomes	
	H: Surface area, Mass Density Volume, Speed Distance Time. Problem solving	
Half Term		
21	F: Completing Venn diagrams and calculating probabilities Transformations -translations, reflections and rotations	
	H: Straight line graphs – plotting, exploring, gradients and finding equations of lines when given a line or points.	
22	F: Enlargements, including finding the centre of enlargement Describing as single transformation Recap of expanding and simplifying	
	H: $Y = mx + c$ and rearranging equations into the form $y = mx + c$ Mutually exclusive and independent events – addition and multiplication rules Probability tree diagrams and using tree diagrams to find probabilities	
23	Revision, assessment & response F: Recap linear factorising then start factorising quadratics when $a = 1$ H: Venn diagrams, set notation and probabilities	Year 9 spring exams – P2 Non-calculator - Learning Landmark 7
24	F: Recap of averages and ungrouped table and comparisons. Estimated mean Drawing bar graphs for discrete and continuous Dual and compound bar charts	
	H: Transformations -translations, reflections and rotations Enlarge 2D shapes, given a centre of enlargement and integer or fractional scale factor, positive or negative Describe the single transformation	
25	F: Recap stem and leaf diagrams. Properties of 2D and 3D shapes Plans and elevations, and isometric drawings Recap all things area inc. circles and compound	Spring Mixed Homework sheet 15 – Learning Landmark 8
	H: Recap of expanding and factorising with single brackets. Expand double brackets including squared brackets Factorise and quadratic equations where $a=1$ and where $a>1$	Spring Mixed Homework sheet 7/8 – Learning Landmark 8
26	F: Revise all things volume Problem solving Pythagoras	
	H: Plans & elevations Drawing 3D shapes on isometric paper Surface area and volume of prisms – including working backwards to find missing lengths	
Easter		
27	F: Pythagoras applied questions Recap powers, roots and basic rules of indices, 0 and negative indices Frequency polygons	
	H: Surface area and volumes of spheres, cones & pyramids – give answers in terms of π and as a decimal. Include working backwards to find missing lengths.	
28	F and H: Revision & assessment Assessment response Magic squares	Year 9 Summer exams – P1 Calculator – Learning Landmark 9
29	F: Recap pie charts & line graphs Calculations involving time and timetables. Speed time graphs	
	H: Pythagoras and Trig – right angled triangles Non right angled triangles: Sine rule, Cosine rule and Area of a triangle using $\frac{1}{2} ab \sin C$	

30	F: Plotting curved graphs Ratio recap Proportion, including best buys, and recipes	Summer Mixed Homework sheet 17 - Learning Landmark 10
	H: Use trigonometry to solve problems in 2D and 3D. Practical activities on Pythagoras and Trigonometry.	Summer Mixed Homework sheet 2/3 - Learning Landmark 10
31	F: Review of percentages including decimal multipliers, compound percentage change, one number as a percentage of another, percentage change, and reverse percentages	
	H: Review of all rules of indices Intermediate Maths Challenge (2005) Misleading graphs	
Half Term		
32	F: Review of all percentage Recap solving equations Forming expressions & forming and solving equations	
	H: Histograms including frequency density Linear graphs recap – gradient and intercept Graphs of quadratic and cubic functions	
33	F and H: Revision, assessment & response Pascals triangle	Year 9 Summer exam P2 – Learning Landmark 11
34	F: Solving simultaneous by elimination when given a match Recap the four operations with fractions with a focus on mixed number	
	H: Graphs of reciprocal functions Graphing linear inequalities Percentage increase / decrease using decimal multipliers – include finding original amount and compound interest and depreciation	
35	F: Financial literacy e.g. completing bills/statements, pay slip, VAT, mortgages and loans Expanding and factorising review	Summer Mixed Homework sheet 7 – Learning Landmark 12
	H: Find percentage increase / decrease given original and final amounts Use percentages in real life situations such as compound interest, VAT and income tax, profit and loss etc Calculate the overall impact of a number of % changes even if the original is not stated e.g. the sides of a cube are each increased by 10%, what is the overall increase in volume / surface area.	Summer Mixed Homework sheet 7 – Learning Landmark 12
36	F: Recap compass constructions. Review plans and elevations, then isometric using multilink	
	H: Expand and simplify double brackets. Factorise and quadratic equations (including the difference of two squares) when $a=1$ and when $a>1$ Expand the product of more than two binomials and simplify	
37	Consolidation End of term activity	