Year 10 Topic Overview and Assessments

Week	Topic	Assessment Learning Landmark
1	F: Percentages including non-calculator and calculator methods Increasing and decreasing by a percentage Simple and compound interest	
	H: Percentages including non-calculator and calculator methods, increasing & decreasing, compound interest and reverse percentages Expanding single, double and triple brackets Factorising linear expressions & quadratics (when a=1)	
2	F: A number as a percentage of another number Reverse percentages Expanding single and double brackets Factorising linear expressions and difference of two squares	LL1: Mixed homework sheet 2
	H: Factorising quadratics when a >1 Adding, subtracting, multiplying and dividing numerical fractions including mixed numbers	
3	F: Factorising quadratics (when a=1) Problem solving Fraction of a number Adding and subtracting fractions, including mixed numbers	
	H: Adding, subtracting, multiplying and dividing algebraic fractions Terminating or recurring decimals investigation Recurring decimals to fractions	
4	F: Multiplying and dividing fractions, including mixed numbers Fractions to decimals (inc. recurring decimals) and decimals to fractions (terminating only) Reciprocals FDP conversions	
	H: Solving 2 step equations, equations involving division and brackets & equations with unknowns on both sides Forming and solving equations Solving linear inequalities, representing on number lines and quadratic inequalities	
5	F: Solving 2 step equations, equations involving division and brackets & equations with unknowns on both sides Create and solve equations	
	H: Solving linear simultaneous equations Quadratic simultaneous equations Create and solve simultaneous equations/consolidation	
6	F: Inequalities including on a number line Revision, assessment and response	LL2: Test 1 (non-calculator)
	H: Revision, assessment and response Problem solving	
7	F: Simultaneous equations by elimination Product of prime factors & HCF and LCM	
	H: HCF and LCM Rules of indices recap, and negative/fractional indices	
Half Term		
8	F: Using Venn diagrams for HCF LCM Powers and roots Rules of indices recap (multiplying, dividing and brackets), power 0 and negative powers	
	H: Maths challenge or indices consolidation lesson Rules of indices – rewriting bases Surds– simplifying, adding and subtracting, multiplying and dividing	
9	F: Standard form - converting between ordinary numbers and standard form Calculations in standard form Pythagoras	
	H: Expanding with surds Rationalise the denominator Standard form – converting between standard form and ordinary numbers Calculations in standard form	
10	F: Pythagoras Construct triangles and nets Scale drawing Plans and elevations	LL3: Mixed homework sheet 7
	H: Combinations/product rule Pythagoras Trigonometry – missing sides and angles	
11	F: Trigonometry – missing sides and angles Problem solving	
	H: Pythagoras/Trig/ 3D problems Sine rule, cosine rule & area of non-right angled triangles	
12	F: Revision, assessment and response Ratio	LL4: Test 2 (calculator)
	H: Pythagoras/trig/sine/cosine – which rule? Review. Revision, assessment and response	

13	F: Ratio – simplifying, sharing, given the difference, given one value & identifying the type of question Combining two ratios into a single ratio	
	H: Exact trig values Ratio – simplifying and sharing, difference, given one value and combining ratios	
14	F: Direct proportion Bar modelling Christmas activities	
	H: Ratio consolidation Proportion including direct and inverse Christmas activity	
Christmas		
15	F: Drawing and measuring angles Basic angle rules & angles between parallel lines	
	H: Consolidation of direct and inverse proportion Angles in parallel lines & polygons	
16	F: Angle problems (equations linked to angle facts) Angles in polygons & regular polygons Perimeter and area of rectangles, triangles, parallelograms and trapeziums	LL5: Mixed homework sheet 10
	H: Angles in polygons Bearings Circle theorems	
17	F: Area of compound shapes Area and circumference of a circle Area and perimeter of part circles and sectors	
	H: Circle theorem consolidation or proof. Area of rectilinear shapes including compound shapes Area and circumference of circles Area and perimeter of compound shapes including quarter and half circles	
18	F: Revision, assessment and response Problem solving	LL6: Test 3 (non-calculator)
	H: Revision, assessment and response Arcs and sectors	
19	F: Data collection vocabulary Dual bar graphs Frequency polygons Pie charts	
	H: Segments Vocab of data collection and issues with collection Stratified sampling Capture recapture	
20	F: Pie charts Averages from a list and backwards, from a discrete table, & from a grouped table	
	H: Frequency polygons Pie charts Averages from a list and problems, including combining means & from a table and estimated mean.	
Half Term		
21	F: Stem and leaf diagrams Compare sets of data using range and an average Probability basics check	
	H: Stem and leaf diagrams including back-to-back and finding averages Comparing averages Cumulative frequency graphs & box plots	
22	F: Revision, assessment and response Sample space	LL7: Test 4 (calculator)
	H: Revision, assessment and response Comparing cumulative frequency graphs and box plots	
23	F: Relative frequency and expected outcomes Venn diagrams (does not include set notation) Frequency trees Probability trees with replacement	
	H: Probability (basic principles) relative frequency and expected outcomes. Sample space diagrams. Tree diagrams for independent events	
24	F: Probability trees without replacement Time and timetables Volume of a cuboid & a prism	
	H: Tree diagrams for dependent events Tree diagrams – consolidation and algebraic Venn diagrams – complete given information & set notation	
25	F: Volume of a prism and working backwards Volume of spheres, cones and pyramids (formula will be given) Surface area	LL8: Mixed homework sheet 15

	H: Volume of prisms and working backwards Volume of cones and spheres and working backwards Algebraic modelling with volume Surface area of prisms	
26	F: Angles recap Estimation using measures and imperial conversions Metric conversions (including km/h to m/s) Speed, distance, time	
	H: Surface area of cones and spheres Review angles on parallel lines and polygons Review bearings and including trig Circle theorem review	
Easter		
27	F: Pressure, force, area Density, mass, volume Bearings	
	H: Metric units Speed distance time including combining and km/h to m/s Pressure force area Density mass volume	
28	F: Two-way tables Drawing scattergraphs, describing correlations and outliers Draw a line of best fit and use it to make predictions	
	H: Nth term – types of sequences, generating sequences, finding linear nth term and determining if a term is in a sequence Quadratic nth term Geometric sequences including surds	
29	F: Revision, assessment and response Problem solving	LL9: Summer exam P1 (non-calculator)
	H: Revision, assessment and response Problem solving	
30	F: BIDMAS, decimal places and significant figures Estimating answers by rounding to 1sf Types of sequences - Arithmetic, Geometric and Fibonacci style sequences Nth term formula – linear – generate from a formula and find a formula	
	H: Changing the subject of the formula, including with letters on both sides Substitution in to SUVAT Review numerical and algebraic fractions	
31	F: Nth term formula – find a formula and decide if value will appear in sequence. (Including picture patterns) Nth term formula – quadratic Change the subject of simple formulae Substitute numbers into a formula including negative numbers	LL10: Mixed homework sheet 19
	H: Scatter graphs Histograms	
Half Term		
32	F: Fractions revision Modelling with algebra – form and solve equations. Plot coordinates and coordinate problems Straight line graphs – x=, y= and simple mappings Draw a graph from a table	
	H: Fractions revision. Review recurring decimals to fractions Plot straight line graphs from tables, including x= and y = Gradient and intercept, including between 2 points Finding equations of straight line graphs	
33	F: Revision, assessment and response Y=mx+c (gradient and find the equation)	LL11: Summer exam P2 (calculator)
	H: Revision, assessment and response Parallel lines and equations of lines between 2 points	
34	F: Y=mx+c (gradient and find equation) Speed/distance, velocity/time graphs Translations Reflections	
	H: Perpendicular lines Consolidation lesson on line graphs Translation, rotation & reflection and describing these transformations	
35	F: Rotations Enlargements including finding the centre Describing transformations	LL12: Mixed homework sheet 21
	H: Enlargements, including describing and finding the centre of enlargement and negative scale factors Describing mixed transformations	LL12: Higher summer 8
36	F & H: Perpendicular and angle bisectors & loci Constructing triangles and nets	

37	F & H: Catch up/review of necessary topics	