

## Year 10 Foundation Scheme of learning 2023-2024 - Term 1

Stretch key learning in italics

Topic	Key learning	Mathswatch Clips	⊗	☹	☺
Fractions, decimals and percentages recap	Add, subtract, multiply and divide mixed number fractions	71a, 71b, 73, 74			
	Find percentage of a quantity with and without a calculator	86 & 87			
	<i>Find the reciprocal of an integer, decimal or fraction</i>	76			
Perimeter and area	Find the area and perimeter of rectangles, triangles, parallelograms and trapezia	52 - 56			
	Calculate the areas and perimeters of compound shapes	52 - 56			
	Find the surface area of a prism	114a & 114b			
	<i>Convert between metric area measures</i>	112			
	Compare and order fractions, decimals and integers, using inequality signs	84 & 85			
Loci, Constructions and bearings	Estimate and measure lengths and angles	46a			
	Draw accurate lengths and angles	46b			
	Draw and measure bearings	124			
	Construct perpendicular bisectors and angle bisectors	145 – 146			
	<i>Use constructions to solve loci problems</i>	165			
Straight line graphs	Plot and draw graphs of $y = a$ , $x = a$ , $y = x$ and $y = -x$	96			
	Plot and draw graphs of straight lines of the form $y = mx + c$ using a table of values	96			
	<i>Sketch a graph of a linear function, using the gradient and y-intercept</i>	96 & 97			
	<i>Identify and interpret gradient from an equation <math>y = mx + c</math></i>	159a & 159b			
	<i>Find the equation of a straight line from a graph</i>	159a & 159b			
October half term					
Assessment 1 on topics taught so far this year					
Real life graphs	Draw, label and scale axes				
	Draw and interpret distance–time graphs	143			
	<i>Interpret gradient as the rate of change in distance–time and speed–time graphs, graphs of containers filling and emptying</i>	143			
Reflections & Enlargements	Identify the equation of a line of symmetry;	11			
	Transform 2D shapes using single reflections (including those not on coordinate grids) with vertical, horizontal and diagonal mirror lines;	48			
	Understand that an enlargement is specified by a centre and a scale factor; A positive integer scale factor; A fractional scale factor;	148			
	Enlarge a given shape using (0, 0) as the centre of enlargement, and enlarge shapes with a centre other than (0, 0);	148			
	Find the centre of enlargement by drawing;	148			
	Describe and transform 2D shapes using enlargements by:	148			
	Identify the scale factor of an enlargement of a shape as the ratio of the lengths of two corresponding sides, simple integer scale factors, or simple fractions;	148			
	Understand that distances and angles are preserved under reflections, so that any figure is congruent under this transformation;	12			
Understand that similar shapes are enlargements of each other and angles are preserved – define similar in this unit;	148				

Rotations & Transformations	Draw and describe reflections using a mirror line	48			
	Draw and describe translations using vectors	50			
	Draw and describe rotations using a centre of rotation	49			
	Draw and describe enlargements using positive scale factors	148			
	Understand that similar shapes are enlargements of each other	148			
	<i>Draw and describe enlargements using negative and fractional scale factors</i>	148			
Ratio	Simplify ratios, write ratios as fractions and in the form 1:n	38			
	Share amounts into a ratio	106			
	<i>Solve problems involving ratios</i>	106			

**Christmas**