Year 11 Higher | | Term 1 | Knowledge Organiser

Transformations				Bearings						Volume & Surface Area		
1	Enlarge	To make a shape bigger or smaller by a given	1	Cardinal directions		North, South, East, West			1	Volume	The amount of size within a 3D shape	
	Scale factor	The multiple describing how much a shape has been enlarged	2	2 Bearing		The angle in degrees measured clockwise from North						
2			3	Clockwise		Moving in the direction of the hands of a clock			2	Volume	Units - m^3 , cm^3 , mm^3 etc	
			4	Protractor		An instrument used for measuring or drawing angles						
3	Line of symmetry	metry shape with a mirror image on either side		Construct		To draw accurately using a compass, protractor and ruler			3	Surface Area	The total areas of each face of a 3D shape	
	Symmetry			6 Scale		The ratio of the length of a drawing to the length of the real thing					A 3D shape that has	
4	Reflect	Mapping of one object from one position to another of equal distance				Circle Theorems				Prism	the same cross- section all the way along it	
		from a given line Movement around a fixed	Angle in a				Angle between radius and tangent is		5	Volume of a cube/ cuboid	length × width × height	
5	Rotate	point by a certain number of degrees	sem	semicircle is 90°					6	Volume of a	area of cross – section	
6	Translation	When an object is moved from one place to another by a given vector					90°	/		prism	× length	
			_	les in the	b b	Opposite angles in a cyclic quadrilateral add to 180°		7	Volume of a cylinder	$\pi r^2 h$		
7	Invariant	A point that does not move after a transformation	sam segi equ	ment are				8	Volume of a cone	$\frac{1}{3}\pi r^2 h$		
8	Horizontal	A straight line parallel with the x-axis	cent	Angle at the centre is twice the angle at the circumference		2a	Alternate segment theorem	e	9	Volume of a pyramid	$\frac{1}{3}$ × area of base × height	
9	Vertical	A straight line parallel with the y-axis	the						10	Volume of a sphere	$\frac{4}{3}\pi r^3$	