

Topic List for the Yr 8 SKI Assessment June 2025		Sparx Code	R	A	G
Ratio and Scale	Understand and represent ratio and use ratio notation	M885			
	Use equivalent ratio to solve problems	M801			
	Solve problems involving ratio and divide into a given ratio	M801, M525			
	Solve problems with ratio including 1:n	M543			
	Understand and use Pi as a ratio between diameter and circumference	M169			
Multiplicative change	To solve problems involving direct proportion	M478, M472			
	To explore conversion graphs	M771			
	To explore relationships between similar shapes and scale factors	M324			
	To draw and explore scale diagrams	M112			
Working in the cartesian plane and straight line graphs	To work with and plot coordinates	M618, M320			
	To recognise and use lines $y = x$ and $y = kx$	M797			
	To explore the gradient of a line including negative gradients	M544, M205			
	To plot graphs in the form $y = mx + c$	M932			
	To explore non linear graphs	M771			
	To find the midpoint of a line segment	M622			
	Use and understand $y = mx + c$	M544, M888			
Tables and probability	To write probabilities as fractions, decimals or percentages	M938			
	To find probabilities from sample space diagrams and two way tables	M718			
	To interpret and create Venn diagrams	M419			
	To use the product rule for finding the total possible outcomes	M332			
	To find probabilities from Venn diagrams	M829			
Brackets equations and inequalities	To form algebraic expressions	M795, M531			
	To solve 2 step equations	M634, M647			
	To multiply out a single bracket, and to factorise to a single bracket	M237, M100			
	To expand a pair of binomials, and factorise	M950, M908			
	To solve equations, including with brackets	M902			
	To understand inequalities including on a number line	M384			
	To understand and solve simple inequalities	M118			
	To solve equations and inequalities with unknowns on both sides	M554, M732			
Fractions	To form and solve equations	M957			
	To convert between mixed and improper fractions	M601			
	To add and subtract fractions with any denominator	M835			
	To add and subtract mixed and improper fractions	M931			
	To multiply fractions by integers	M157			
	To find the product of any pair of fractions	M157			
	To divide any pair of fractions	M110			
	To understand and use reciprocal	M216			
	To multiply and divide improper and mixed fractions (H)	M197, M265			
Area and circles	To calculate area of triangles, rectangles and parallelograms	M390, M635			
	To calculate area of a trapezium	M705			
	To calculate area of circles	M231			
	To find the circumference of circles	M169			
	To find area of sectors	M430			
	To find arc length	M280			
Indices	To calculate area and perimeter of compound shapes	M996, M303			
	To use roots and powers	M135			
	To simplify algebraic expressions by multiplying indices	M120			
	To simplify algebraic expressions by dividing indices	M120			
	To use index rules with negative indices	M150			
Percentages	To convert between fractions decimals and percentages	M264			
	To find fractions and percentage of amounts	M476			
	To calculate the percentage increase and decrease with multipliers	M905			
	To calculate percentage change	M533			
Standard form	To use standard form with positive indices and negative indices	M719, M678			
	To complete calculations with numbers in standard form	M719, M678			