

Key Performance Indicator	Maths: Year 8 Milestones (Skills)
Develop Fluency	I can consolidate my numerical and mathematical capability from key stage 2 and extend my understanding of the number system and place value to include decimals, fractions, powers and roots.
	I can select and use appropriate calculation strategies to solve increasingly complex problems.
	I can move between different numerical, algebraic, graphical and diagrammatic representations [for example, equivalent fractions, fractions and decimals, and equations and graphs].
	I can use language and properties precisely to analyse numbers, algebraic expressions, 2-D and 3-D shapes, probability and statistics.
Reason Mathematically	I can extend my understanding of the number system; make connections between number relationships, and their algebraic and graphical representations.
	I can extend and formalise my knowledge of ratio and proportion in working with measures and geometry, and in formulating proportional relations algebraically.
	I can make and test conjectures about patterns and relationships; look for proofs or counter-examples.
	I can begin to reason deductively in geometry, number and algebra, including using geometrical constructions.
	I can interpret when the structure of a numerical problem requires additive, multiplicative or proportional reasoning.
	I can explore what can and cannot be inferred in statistical and probabilistic settings, and begin to express my arguments formally.
Solve Problems	I can develop my mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems.
	I can develop their use of formal mathematical knowledge to interpret and solve problems, including in financial mathematics.
	I can begin to model situations mathematically and express the results using a range of formal mathematical representations.
	I can select appropriate concepts, methods and techniques to apply to unfamiliar and non-routine problems.