



Curriculum Overview for Mathematics Year 9

Declarative Knowledge: Recognise the four quadrants of a co-ordinate grid Plot co-linear points in 1 quadrant of a coordinate grid Plot co-linear points in 1 quadrant of a coordinate grid Plot co-linear points in 1 quadrant of a coordinate grid Plot co-linear points in 1 quadrant of a coordinate grid Procedural Knowledge: Create an equation for graphs with +ve gradients including decimals and fractions Create an equation for graphs with +ve gradients including decimals and fractions Create an equation for graphs with a positive gradient and +ve intercept Plot point in 4 quadrants recap Create an equation for graphs with a ve gradients including decimals and fractions Create an equation for graphs with a ve gradients including decimals and fractions Create an equation for graphs with a ve gradients including decimals and fractions Create an equation for graphs with a ve gradients including decimals and fractions Create an equation for graphs with a ve intercept Identify the intercept from y = mx + c Rearrange to find the above mx + y = c Substitute into and generate coordinate for y = - (x) +cEnd of unit exam completed for Exploring (raphs. Retrachmented) Dr Frost Maths – practising skills using DrFrost.org (a unique username and password will be provided by the school)We expect Year 9 pupils to spend 30 minutes on homework for Maths per week.Dr Frost Maths – practising skills using DrFrost.org (a unique username and password will be provided by the school)We expect Year 9 pupils to spend 30 minutes on homework for Maths per week.Proceeding the proceeding the p	Half Term 1: Exploring Graphs		Modelling reading of questions
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Recognise limits of a calculator	Apply knowledge to across a range of linear graphs		
	Recognise limits of a calculator		





		Wider links to the world
Half Term 1: Expanding and Factorising		Modelling reading of questions
Declarative Knowledge:		by the class teacher – teaching
Understand that single brackets produce a li		like a Mathematician
graph and double brackets produce a quadra		Two key words at the start of
graph		each lesson defined
Brahi		Expectation of Mathematical
Procedural Knowledge:		vocabulary used in lessons
Expand brackets with only positives		Inequality Identity Equivalent
Expansion with more than 1 letter and/or mo	re 🛛	Equation Formula, Formulae
than 2 terms		Expression Expand Linear
Expansion and simplify with 2 or more brack	ets L	Quadratic
Expansion to problems with negatives withir	n the	
brackets		
Expansion to problems with a negative outsi	de the	End of unit exam completed for
brackets		Expanding Factorising.
Expansion with negative with 2 or more brac	kets	Reteaching and relearning
Expansion with all fractions		opportunities will be delivered to
Expansion with 2 brackets (all positive)		each class dependent on the
Expansion with 2 brackets (all negative)		performance of each class.
Expansion with 2 brackets (mixed signs)		'
Expansion with 3 brackets		Dr Frost Maths – practising skills
Factorise into a bracket with only positives a	nd	using DrFrost org (a unique
negative inside the bracket		username and password will be
Factorisation with pogative common factors		provided by the school)
Factorise with indices greater than a		provided by the schooly
Factorise quadratics (Only positives)		We expect Vear a pupils to
Factorise quadratics (With negatives)		spend to minutes on homowork
		for Mothe persuaal
Conditional Knowledge:		for maths per week.
Know when to expand first or divide first to	solve	
an equation.		
Sketch the graph from the factorised quadra	tic.	
Half Term 2: Rounding and Bounds		Modelling reading of questions
		by the class teacher – reading
Declarative Knowledge:		like a Mathematician and BUG
Identify the significant figures of a number in	i an	Two key words at the start of
Integer		each lesson defined
Identity the significant figures of a number th	lat 0 <	Expectation of Mathematical
Identify the decimal places of a number		vocabulary used in lessons
Know what truncating is		
Know the impact of truncating compared to		Inequality, Truncate, Round,
rounding		Minimum, Maximum, Interval.
Know when truncating is more / less appropri	riate	Decimal place. Significant figure.
than rounding		Upper Bound, Lower Bound,
Ŭ		Focus digit. Decider digit
Procedural Knowledge:		
Round numbers to one or two significant fig	ures	End of unit exam completed for
Round numbers to one and two decimal plac	es 📃	Rounding and Bounds.
Identify the minimum and maximum values of	of an	Reteaching and relearning
amount that has been rounded (to nearest x	, x 🛛 🗖 🖌	opportunities will be delivered to
d.p., x s.f.)		each class dependent on the
		performance of each class.





Conditional Knowledge:		Dr Frost Maths – practising skills
Use inequalities to describe the range of values for	•	using DrFrost.org (a unique
a rounded value		username and password will be
Solve problems involving the maximum and		provided by the school)
minimum values of an amount that has been		
rounded		We expect Year o pupils to
		spend 20 minutes on homework
		for Maths por wook
Half Term 2: Laws of Indices		Modelling reading of questions
		by the class teacher – reading
Declarative Knowledge:		like a Mathematician and BUG
Know that an index represents the number of		Two key words at the start of
times you multiply the base by itself	•	each lesson defined
Know that expressions with an index and the same		Expectation of Mathematical
base can be simplified using index laws		vocabulary used in lessons
Know the zero-index law		Index, indices, power, multiply,
Know the one-index law		divide, zero, base, law
Know that bases with a negative index are the		
reciprocal of the power		
Know that raising fractions to an integer power		
means raising both numerator and denominator by		
the power individually and then simplifying		End of unit exams completed for
		Laws of indices.
Procedural Knowledge:		Reteaching and relearning
Evaluate indices with a negative base	— ~	opportunities will be delivered to
Simplify expressions using the law of indices for	-~	each class dependent on the
multiplication		performance of each class
Simplify expressions using the law of indices for		performance of cach class.
division		Dr Frost Mathe practicing skills
Simplify expressions using the law of indices for		DI FIOSI Mattis – practising skills
powers		using DrFrost.org (a unique
Simplify expressions using the zero-index law		username and password will be
Simplify expressions using the one-index law		provided by the school)
Calculate with fractions with integer indices		
		We expect Year 9 pupils to
Conditional Knowledge:		spend 30 minutes on homework
Simplify expressions using more than one law of		for Maths per week.
INDICES		
Calculate with negative indices		