

Learning Plan 1		Subject/Pwnc: Mathemateg	Year/Blwyddyn: 10 (A)		
<p><u>The Four Purposes in Maths and Numeracy:</u></p> <p>Ambitious, capable learners who: set themselves high standards; seek and enjoy challenge; are increasingly knowledgeable and skilful; are questioning; enjoy solving problems; can communicate effectively; can explain the ideas and concepts; can use number effectively; understand how to interpret data and apply mathematical concepts</p> <p>Enterprising, creative contributors who: connect and apply their knowledge and skills to create ideas; think creatively to reframe and solve problems; identify and grasp opportunities; take measured risks</p> <p>Ethical, informed citizens</p> <p>Healthy, confident individuals who: face and overcome challenge; have the skills and knowledge to manage everyday life</p> <p>Knowledge focus/what matters:</p> <p><i>Rounding and estimating, indices, surds, irrational numbers, recurring decimals:</i> <i>The number system is used to represent and compare relationships between numbers and quantities.</i></p> <p><i>Equations, identities, inequalities and formulae:</i> <i>Algebra uses symbol systems to express the structure of mathematical relationships.</i></p>					
Learning objective/key question	What will I know and be able to do? I can...	How will I develop my skills? (Success Criteria)		Homework/Gwaith cartref to support progress	
Weeks 1-2: Rounding and estimating	<ul style="list-style-type: none"> round whole numbers to the nearest 10, 100, 1000, etc; to the nearest whole number; to a given number of decimal places round numbers to a given number of significant figures estimate solutions to numerical calculations by approximating the numbers in the calculations 	<p>I have a thorough understanding of rounding and estimation, that I can apply to strategically solve problems in different contexts.</p> <p>I can develop appropriate methods for estimation, by applying my prior knowledge and understanding.</p> <p>I can answer questions by summarising my findings or ideas, and I can evaluate answers, finding ways to improve upon them.</p> <p>I can produce accurate and concise verbal and written responses or justifications, explaining my reasoning clearly.</p>		Wk 2	<p>Mathswatch homework</p> <p>Set: 12/9/25</p> <p>Due: 19/9/25</p>
Assessment at the end of week 2					
Week 3: What are fractional indices?	<ul style="list-style-type: none"> understand the notation for fractional indices use the rules of indices to perform calculations with numbers written in index 	<p>I have a detailed understanding of indices and their laws, including fractional and negative indices.</p> <p>I can apply my prior knowledge and understanding (of calculating with fractions, and of positive integer indices) to investigate fractional indices and use this to form my own ideas and methods.</p>		Wk 3	<p>Mathswatch homework</p> <p>Set: 19/9/25</p> <p>Due: 26/9/25</p>



	form for positive, negative and fractional indices	<p>I can evaluate mathematical information to identify the problem, and independently generate, and justify, a clear and concise solution.</p> <p>I evaluate my learning, mistakes and misconceptions, identifying areas for development.</p> <p>I am curious and inquisitive about mathematical concepts.</p> <p>I can answer questions by summarising my findings or ideas.</p>		
Week 4: What are recurring decimals and how can we convert them?	<ul style="list-style-type: none"> understand that recurring decimals are exact fractions, and that some exact fractions are recurring decimals convert recurring decimals to fractional form 	<p>I understand what the different types of decimal number are, and how to classify them.</p> <p>I can develop my own methods for converting any decimal number to fractional form, by making links to my prior knowledge and understanding of decimals, fractions and linear equations.</p> <p>I can answer questions by summarising my findings or ideas, and I can evaluate answers, finding ways to improve upon them.</p> <p>I can communicate mathematically, clearly showing all steps in my solution.</p>	Wk 4	<p>Mathswatch homework</p> <p>Set: 26/9/25</p> <p>Due: 3/10/25</p>
Weeks 5-6: Rational or irrational?	<ul style="list-style-type: none"> distinguish between rational and irrational numbers manipulate and simplify numerical expressions involving surds manipulate and simplify more complex numerical expressions involving surds, including multiplying expressions containing surds and simplifying fractions containing surds by division of common factors 	<p>I understand and can explain the concept of rationality.</p> <p>I can apply my understanding of roots and rationality, to strategically solve problems in mathematical contexts.</p> <p>I evaluate my learning, mistakes and misconceptions, identifying areas for development.</p> <p>I am curious and inquisitive about new mathematical concepts – I make links to my prior knowledge and use this to investigate new concepts (such as surds).</p> <p>I can communicate effectively using mathematical notation.</p>	Wk 5	<p>Mathswatch homework</p> <p>Set: 3/10/25</p> <p>Due: 10/10/25</p>
			Wk 6	<p>Mathswatch homework</p> <p>Set: 10/10/25</p> <p>Due: 17/10/25</p>
Weeks 7-8: Understand and work with identities, equations, inequalities and formulae.	<ul style="list-style-type: none"> recognise the definition of the term identity and be able to distinguish between identities, equations, expressions, inequalities and formulae change the subject of a formula when the subject appears in one term form, manipulate and solve more complex linear equations, including equations with more than one fractional term form, manipulate and solve linear inequalities where the variable appears on both sides of the inequality or where two 	<p>I have a thorough understanding of equations, identities, formulae and inequalities, that I can apply in different contexts.</p> <p>I can independently generate ideas, explanations and solutions.</p> <p>I can choose appropriate methods to check the accuracy of my own solutions and improve upon them.</p> <p>I can use and explain the vocabulary of algebra.</p> <p>I can communicate effectively using symbols and/or appropriate algebraic notation.</p>	Wk 7	<p>Mathswatch homework</p> <p>Set: 17/10/25</p> <p>Due: 24/10/25</p>
			Wk 8	<p>Mathswatch homework</p> <p>Set: 24/10/25</p> <p>Due: 7/11/25</p>

	separate inequalities are written as a double inequality	I can make links and connections with my prior knowledge (of expressions, equations and inverse operations) and use these to develop methods for solving more complex equations and inequalities.		
Assessment at the end of week 8				