Learning Plan 1	Subject/Pwnc: Mathemateg	Year/Blwyddyn: 9

The Four Purposes in Maths and Numeracy:

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

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

Ethical, informed citizens

Healthy, confident individuals who:
face and overcome challenge; have the skills and knowledge to manage everyday life

Knowledge focus/what matters:

Indices and index laws:
The number system *is used to represent and compare relationships between numbers and quantities.*

Equations, expressions and graphs:
Algebra *uses symbol systems to express the structure of mathematical relationships.*

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 1-3: Solve equations	• Understand the basic conventions of algebra. • Collect like terms. • Expand simple brackets. • Form, manipulate and solve linear one-step equations. • Manipulate and solve 2-step linear equations with whole number coefficients. • Manipulate and solve multi-step linear equations with whole number coefficients. • Form and solve equations to solve problems in a variety of contexts	I use my understanding of algebra to logically reason and make justifications. I can recall and apply mathematical operations, including the hierarchy of operations and inverse operations, in the context of algebraic equations. I can present my solutions in a structured and mathematically correct format. I can choose appropriate strategies to assess and evaluate my learning, as well as to identify and correct my mistakes. I can support my solutions and answers with clear mathematical reasoning.	Wk 2	Mathswatch homework Set: 12/9/25 Due: 19/9/25
			Wk 3	Mathswatch homework Set: 19/9/25 Due: 26/9/25

Weeks 4-5: Interpret and use coordinates, graphs and gradients	• Use coordinates in 4 quadrants. Draw, interpret, recognise and sketch the graphs of x = a, y = b. • Plot linear graphs • Investigate gradients • Calculate gradients • Investigate and use y = mx + c (Amplify has some good tasks for this - previously DESMOS) • Set 1/2: Identify the equations of lines parallel or perpendicular to a given line. Set 3/4: consolidate understanding of graphs, gradients and y = mx + c	I have an understanding of coordinates and graphs, that I can fluently apply and use to make justifications. I can recall and use facts and properties related to coordinates and linear graphs. I can analyse mathematical information presented on coordinate axes. I can identify the problem, as well as the steps to solve it. I can present my solution in a suitable, structured and mathematically correct format. I can ask meaningful questions to deepen my understanding. I can use digital technologies to help me investigate, analyse and evaluate graphical information.	Wk 4	Mathswatch homework Set: 26/9/25 Due: 3/10/25
			Wk 5	Mathswatch homework Set: 3/10/25 Due: 10/10/25
Weeks 6-7: Understand and use indices	• Know the notation for positive integral indices. • Investigate and use the notation for zero and negative indices. Know the meaning of the term reciprocal. • Recall and use the rules of indices to perform calculations with numbers written in index form for positive integral indices. • Extend the rules of indices to perform calculations with numbers written in index form for positive and negative integral indices. • Use numbers written in standard form. • Convert ordinary numbers into and out of standard form.	I can logically reason and make justifications by applying my understanding of indices and standard form. I can recall index laws, and identify when and how to apply each one. I can form explanations and solutions. I assess and evaluate my learning and mistakes. I support my solutions and arguments with clear reasoning, verbally and in my written work; I can communicate mathematically. I can make links between standard form and related contexts, from other AoLEs as well as wider contexts.	Wk 6	Mathswatch homework Set: 10/10/25 Due: 17/10/25
			Wk 7	Mathswatch homework Set: 17/10/25 Due: 24/10/25
Week 8: Multiply and divide with algebra (continues in LP2)	• Expand expressions - single bracket. • Multiply and divide terms by applying rules of indices. • Simplify algebraic fractions by dividing by common factors.	I can build on my knowledge of indices to work with algebraic terms. I can ask meaningful questions to deepen my understanding of algebraic multiplication and division. I support my solutions and arguments with clear reasoning, verbally and in my written work. I can communicate mathematically. I can fluently apply concepts of algebra and indices to logically reason and start solving problems.	Wk 8	Mathswatch homework Set: 24/10/25 Due: 7/11/25