

**SUBJECT: Maths and Numeracy
Learning Plan 2**

Set: Year 11 Higher tier

Knowledge Focus

Statistics: Probability.

Algebra: Simultaneous equations, non linear graphs.

Shape and space: Angles in polygons.



**Ysgol Uwchradd
Prestatyn
High School**

If you are having trouble completing your MathsWatch homework, speak to your maths teacher as soon as possible. You can do this either in your lesson or through Teams.

Skills, Knowledge and Understanding to be developed:

- AND and OR rules for probability.
- Venn diagrams for probability.
- Tree diagrams for probability.
- Interior and exterior angles in polygons.
- Form and solve simultaneous equations graphically.
- Form and solve simultaneous equations algebraically.
- Draw and interpret quadratic graphs.

Key Terms to be learned:

Statistics

Mutually exclusive, Outcome, Event, Probability, Sample space, Compound events, Even chance, Tree diagram, Probability scale, Venn diagram, Independent events.

Shape and space

Acute, Obtuse, Reflex, Convex, Regular, Irregular, Interior angle, Exterior angle, Interior angle sum, Concave.

Algebra

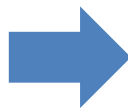
Simultaneous, Equation, Unknown, Inequality Graph, Intersection, Solution, Unknown, Solve, Value, Substitute, Linear, quadratic, coefficient, power, coordinates, table of values, plot, axes, general form, symmetrical, parabola, maximum, minimum, expression.

Week 1 Learning Objectives:

Additional Content for Mathematics only

- State all the outcomes from two events using a list or table (sample space).
- Calculate simple probabilities of two events from Venn diagrams and other diagrammatical representations e.g. bar charts.
- Recognise when probabilities can be associated with independent or mutually exclusive events.
- Use the OR rule to calculate probabilities for mutually exclusive events.
- Use the AND rule to calculate probabilities for independent events.
- Draw tree diagrams to identify all the outcome of a combination of two events.
- Calculate probabilities using tree diagrams.

➤ [Mathswatch clips 120,158, 182, 183, 219.](#)



Objective assessments:

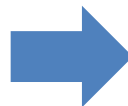
Completion of exam style questions on theoretical probability.

Homework:

Suitable Mathswatch questions set by teacher on theoretical probability.

Week 2, 3 and 4 Learning Objectives:

- Revision of course to date (both Mathematics and Numeracy).
- Completion of mock examinations.
- Bespoke feedback from mocks.
- Topic improvement tasks.



Mock examinations and feedback.

Objective assessments:

Completion of GCSE Mathematics unit 1 paper.

Completion of GCSE Numeracy unit 2 paper.

Homework:

Suitable Mathswatch questions set by teacher.

Week 5 Learning Objectives:

Additional Content for Mathematics only

- Investigate the angle facts for interior and exterior angles of polygons.
- Calculate missing interior and exterior angles for regular polygons.
- Calculate missing interior and exterior angles for irregular polygons.
- Use the angle at the centre of a regular polygon angle fact.

➤ [Mathswatch clip 94.](#)



Objective assessments:

Completion of exam style questions on angles in polygons.

Homework:

Suitable Mathswatch questions set by teacher on angles in polygons.

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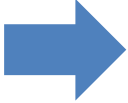
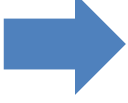
Algebra: Simultaneous equations, non linear graphs.

Shape and space: Angles in polygons.



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<p>Week 6 Learning Objectives:</p> <p><u>Additional Content for Mathematics only</u></p> <ul style="list-style-type: none">• Form two simultaneous linear equations and solve using a graphical method.• Form two simultaneous linear equations (where the coefficients of at least one pair of unknowns is the same) and solve using an algebraic (elimination) method.• Form two simultaneous linear equations (where neither of the unknowns has the same coefficient) and solve using an algebraic (elimination) method.• Draw two or more straight line graphs to locate a region satisfying a set of linear inequalities. <p>➤ Mathswatch clips 144, 171.</p>	<p>Objective assessments:</p> <p>Completion of exam style questions on simultaneous equations.</p> 	<p>Homework:</p> <p>Suitable Mathswatch questions set by teacher on simultaneous equations.</p>
<p>Week 7 Learning Objectives:</p> <p><u>Additional content for Maths</u></p> <ul style="list-style-type: none">• Draw and interpret graphs of the form $y = ax^2 + b$ by completing a table of values.• Draw and interpret graphs of the form $y = ax^2 + bx + c$ by completing a table of values.• Mathswatch clips 133 and 198.	<p>Objective assessments:</p> <p>Completion of exam style questions on quadratic graphs.</p> 	<p>Homework:</p> <p>Suitable Mathswatch questions set by teacher on quadratic graphs.</p>