

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

Set: Year 11 Intermediate tier

Knowledge Focus

Geometry and Measure: Angles in polygons, transformations.

Algebra: Simultaneous equations.



**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:

- Finding missing angles in polygons.
- Solving simultaneous equations both graphically and algebraically.
- Understanding and using properties of position, movement and transformation.

Key Terms to be learned:

Geometry and Measure

Polygon, regular, irregular, interior, exterior, line, plane, symmetry, reflection, order of rotational symmetry, coordinates, grid, origin, congruent, angle of rotation, translation, enlargement, scale factor, rotation, transformation, centre of rotation, axes, vertices, clockwise, anticlockwise, centre of rotation, axes, image, similar.

Algebra

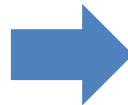
Simultaneous, linear, equation, solve, coefficient, substitute, elimination.

Week 1 Learning Objectives:

Additional Content for Mathematics only

- Identify regular and irregular polygons
- 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.

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

- 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.

➤ [Mathswatch clips 144 and 171.](#)



Objective assessments:

Completion of exam style questions on simultaneous equations.

Homework:

Suitable Mathswatch questions set by teacher on simultaneous equations.

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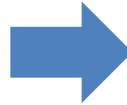
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Weeks 6 and 7 Learning Objectives:

Additional content for Maths

- Reflect shapes given the equation of a vertical, horizontal or diagonal line ($y = x$ or $y = -x$)
 - Rotate shapes through a given angle and direction using a centre of rotation
 - Enlarge shapes by a positive whole number or fractional scale factor (no centre of enlargement)
 - Enlarge shapes using a centre of enlargement and a positive whole number scale factor on squared paper or a coordinate grid
 - Enlarge shapes using a centre of enlargement and a positive fractional scale factor on squared paper or a coordinate grid
 - Recognise and describe translations using column vectors
 - Transform an object applying two successive transformations
- [Mathswatch clips 98, 99, 100, 101, 178.](#)



Objective assessments:

Completion of exam style questions on transformations.

Homework:

Suitable Mathswatch questions set by teacher on transformations.