

Learning Plan 1

YEAR: 10

SUBJECT: Maths (Intermediate)

BLWYDDYN: 10

PWNC: Mathemateg (Ganlrradd)



Knowledge focus: equations and inequalities; area and perimeter; fractions and percentages of amounts, angles

Skills, knowledge and understanding to be developed in this Learning Plan:

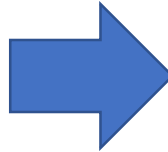
- Forming, manipulating and solving linear equations and inequalities
- Calculating area and perimeter
- Application of fractions and percentages in contexts
- Calculating missing angles

Key terms to be learned in this LP:

Variable, inequality, equation, formula, expression, circumference, diameter, radius, area, perimeter, tessellate, appreciation, depreciation, increase, decrease, scalene, isosceles

Week/Wythnos 1 & 2 Learning Objectives:

- Understand how to form and solve a range of linear equations, including equations where the unknown appears twice
- Change the subject of the formula where the subject appears in one term
- Distinguish between, and group, equations, formulae and expressions
- Form and manipulate simple linear inequalities, including in “real-life” contexts
- Solve linear inequalities with whole number and fractional coefficients, including finding the least/greatest possible integer value



Assessment:
Basics of algebra, units of measure and linear equations/inequalities

Objective assessments:

Be able to:
change the subject of a formula when the subject appears in one term

form, manipulate and solve linear equations and linear inequalities, including in real-life contexts

Homework/Gwaith cartref:

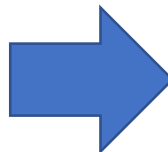
Set:
Due:

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Week/Wythnos 3 & 4 Learning Objectives:

- Calculate the area of a square, rectangle, triangle and parallelogram using a formula
- Calculate the area and perimeter of composite shapes (including where there are unknown sides)
- Investigate ways to find the area of a trapezium
- Investigate pi
- Calculate the area and circumference of a circle
- Calculate the perimeter and area of semicircles
- Calculate unknown dimensions for 2-D shapes when given the area
- Solve real life practical problems involving perimeters, areas, floor/wall tiles and tessellation



Objective assessments:

Be able to:
calculate the perimeter and area of a square, rectangle, triangle, parallelogram, trapezium, circle, semicircle and composite shapes

solve problems in the context of tiling patterns and tessellation

Homework/Gwaith cartref:

Set:
Due:

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Set:
Due:

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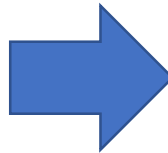


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Week/Wythnos 5 & 6 Learning Objectives:

With or without a calculator:

- Express one number as a fraction or percentage of another
- Find a fraction of a quantity
- Find a percentage of a quantity
- Calculate fractional increase and fractional decrease within context
- Calculate percentage increase and percentage decrease within context
- Solve real life problems involving percentage and fraction calculations
- Calculate the original quantity given the result of a proportional change



With a calculator:

- Find the percentage of an amount
- Use multipliers to calculate percentage increases and decreases
- Calculate repeated proportional changes including exponential growth, decay, appreciation and depreciation

Objective assessments:

Be able to:

find a fraction or a percentage of a quantity

express one number as a fraction or percentage of another

calculate fractional and percentage changes, including repeated proportional changes

find the original quantity given the result of a proportional change

Homework/Gwait h cartref:

Set:

Due:

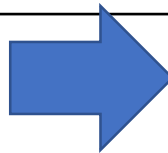
Homework/Gwait h cartref:

Set:

Due:

Week/Wythnos 7 Learning Objectives:

- Use angle facts to determine angles at a point and angles on a straight line
- Use angle properties for scalene, right-angle, isosceles and equilateral triangles to calculate missing angles
- Use the fact that the exterior angle of a triangle is equal to the sum of the interior angles at the other two vertices
- Calculate missing angles at a vertex using the angle fact for vertically opposite angles



Objective assessments:

Be able to:

find angles at a point, at a point on a straight line, and opposite angles at a vertex

recall and apply angle properties of triangles to calculate missing angles

Homework/Gwait h cartref:

Set:

Due: