Unit 7: Revising Algebra π Uned 7: Adolygu Algebra



You should already know…

1. What is meant by algebraic **notation** and commutativity
2. How to **simplify** and **solve** simple algebraic expressions and equations
3. What is meant by **expand, substitute** and **rearrange**

Key Words/ Geiriau Allweddol

- Simplify - **Symleiddiwch**
- Expand - **Ehangu**
- Solve - **Datrys**
- Factorise - **Ffactoriwch**
- Substitute - **Eilydd**
- Formula - **Fformiwla**



In this unit you will revise …

1. How to **simplify**, **expand**, **factorise** and **solve** simple algebraic expressions
2. How to use **substitution** and **word formulae** to solve problems
3. How to form equations and **rearrange** to solve problems

In this unit you will learn…

1. How to **simplify**, **expand**, **rearrange**, **factorise** and **solve** more complex algebraic expressions
2. How to **form** and use **equations** and **inequalities** to model real life situations and solve problems
3. What is meant by index notation

In your future…

- Scientist and Philosopher
- Construction Worker/Builder
- Mathematician

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Unit 8: Angles & Bearings π Uned 8: Onglau a Berynnau

You should already know...

1. Different types of angles
2. Different types of triangles
3. How to measure using a protractor
4. How many degrees make up a full turn.

Key Words/ Geiriau Allweddol



- Acute - **Aciwt**
- Obtuse - **Aflem**
- Reflex - **Atgyrch**
- Right angle - **Ongl Sgwâr**
- Protractor - **Onglydd**
- Equilateral - **Hafalochrog**
- Scalene - **Anghyfochrog**
- Isosceles - **Isosgeles**
- Quadrilateral - **Pedrochr**

In this unit you will revise...

1. Basic **angle** rules of different **triangles and quadrilaterals**
2. How many **degrees** are on a straight line and about a point
3. How to **draw**, **measure** and solve problems using angles

In this unit you will learn ...

1. How to describe position using everyday terminology and **bearings**
2. How to measure and calculate **bearings**
3. How to solve problems using **bearings**

In your future...

- Construction Worker/Builder
- Interior Designer
- Architect
- Pilot

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Unit 9: Transformations π Uned 9: Trawsnewidiadau

You should already know...

1. How to calculate **area** and **perimeter** of rectangles, parallelograms and triangles
2. How to use **units** appropriately
3. What the four **transformations** are
4. How to plot **coordinates** in the four quadrants

Key Words/ Geiriau Allweddol

- Transformations - **Trawsnewidiadau**
- Reflection - **Myfyrdod**
- Rotation - **Cylchdro**
- Translation - **Sifft**
- Enlargement - **Helaethiad**
- Horizontal - **Llorweddol**
- Vertical - **Fertigol**
- Volume - **Cyfaint**



In this unit you will revise...

1. There are 4 types of **transformation**.
2. **Reflection**, **rotation**, **translation** and **enlargement**.
3. How to transform shapes by **following instructions**
4. Describe a transformation using correct mathematical **terminology**
5. How to name **horizontal** and **vertical lines**

In this unit you will learn...

1. How to derive and apply the formulae for the **volume** of simple prisms
2. How to **enlarge** shapes from a **given point**
3. How to use **fractional** **scale factors (H)**

In your future...

- Landscape Artist
- Architect
- Construction Worker/Builder
- Mathematician

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Unit 10: Fractions, Decimals, Percentages & Ratio π Uned 10: Ffracsiynau, Degolion, Canrannau a Cymhareb

You should already know...

- ❑ How to calculate the area and perimeter of 2D shapes
- ❑ How to simplify fractions
- ❑ How to use negative numbers
- ❑ How to order decimals
- ❑ How to find 50%, 25% and 10%

Key Words/ Geiriau Allweddol

- Equivalence - **Cywerthedd**
- Fraction - **Ffracsiwn**
- Decimal - **Degolyn**
- Percentage - **Canran**
- Ascending - **Esgynnol**
- Descending - **Disgynnol**
- Add - **Adio**
- Subtract - **Tynnu**
- Multiply - **Lluosi**
- Divide - **Rhannu**



In this unit you will revise...



- ❑ How to use equivalent fractions to add/subtract fractions.
- ❑ How to +-x÷ decimals.
- ❑ How to find percentage of amounts without a calculator.
- ❑ How to convert between fractions, decimals and percentages.

In this unit you will learn...

- ❑ How to find the area and perimeter of 2D shapes with non-integer lengths.
- ❑ How to simplify and divide into a ratio.
- ❑ About tax.

In your future...

- Working in a Shop/Restaurant.
- Working in Finance or Accountancy.
- Construction Worker

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Unit 11: Linear Sequences and the Cartesian Plane

You should already know...

1. How to create number and shape patterns and explain them in words by generalising them.
2. How to rearrange simple linear equations
3. How to use the four operations for positive and negative numbers

Key Words/ Geiriau Allweddol

- Pattern - **Patrwm**
- Sequence - **Dilyniant**
- Term - **Derm**
- Next - **Nesaf**
- Linear - **Llinol**
- Straight Line Graph - **Graff Llinell Syth**
- Equation - **Hafaliad**
- Gradient - **Graddiant**
- Axis - **Echel**
- Axes - **Echelinau**

In this unit you will learn...

1. How to decide what comes next in a sequence
2. How to generalise **numerical** and **spatial** linear sequence and find the **nth term**.
3. How to use the general nth term rule to **find any term** in that sequence
4. How to complete a table of values for a straight line
5. How to plot linear equations using the equation of a straight-line $y=mx+c$
6. How to identify the **gradient** and **y intercept** of the linear equation

In your future...

- Accountants
- MI5 or MI6
- Work in Insurance

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Unit 11: Analysing Data π Uned 11: Dadansoddi Data

You should already know…

- ❑ How to **plot** in the four quadrants
- ❑ How to draw and interpret **bar charts** and **pictograms** and create **tallies**.
- ❑ What is meant by **average**, **mode**, **mean**, **median** and **range**
- ❑ What is meant by the term **frequency, quantitative and qualitative.**

Key Words/ Geiriau Allweddol

- Data - **Data**
- Frequency - **Amlder**
- Discrete - **Arwahanol**
- Continuous - **Parhaus**
- Qualitative - **Ansoddol**
- Correlation - **Cydberthynas**
- Mean - **Cymedr**
- Mode - **Modd**
- Median - **Canolrif**
- Range - **Amrediad**

In this unit you will revise/learn…

- ❑ How to calculate **averages** and solve problems and come to conclusions using **averages** and **range**.
- ❑ How to plot and interpret **scatter diagrams**, including drawing **lines of best fit** and describing **correlation**.
- ❑ Create and use **frequency tables** for discrete and continuous data (H) to find averages.
- ❑ How to draw and interpret **dual** and **composite bar charts**
- ❑ **Draw and interpret frequency polygons**
- ❑ Draw and interpret fractional **pie charts**
- ❑ Look at **misleading graphs** in the media
- ❑ Use **Microsoft Excel** to your advantage.

In your future…

- **Data** Analyst
- **Businessperson**
- **Sports** Analyst
- Data **Scientist**

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Unit 13: Maths in Real Life π Uned 13: Mathemateg yn y Bywyd

You should already know...

- Words connected to probability
- What a Venn Diagram is and how to interpret it
- How to find theoretical probabilities of dice, spinners, playing cards and coins
- How to convert between FDP
- How to rearrange an equation

Key Words/ Geiriau Allweddol

- Probability - **Tebygolrwydd**
- Experimental - **Arbrofol**
- Time - **Amser**
- Distance - **Pellter**
- Negative - **Negyddol**
- Estimate - **Amcangyfrif**
- Round - **Rowndio**
- Units - **Unedau**



In this unit you will learn...

- ❑ How to interpret a Venn diagram to find theoretical probability
- ❑ How to draw a Venn diagram and use Set Notation (H)
- ❑ How to complete Two-way tables and sample space diagrams
- ❑ Ways to investigate Experimental Probability
- ❑ How to draw and interpret a Time-Distance graph
- ❑ How to read information from a Rates of Change graph
- ❑ What Financial words like 'Tax', 'Credit' 'Debit' and 'Profit' mean.
- ❑ Use Place Value and the Binary system
- ❑ How to round to significant figures

In your future...

- Armed Forces
- NASA
- Engineers
- Welders

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