

# Higher Maths **Revision Support**



This interactive document has been created to provide you with easy access to a wide range of revision materials to support you succeeding in the Higher Maths course.

You can access recorded video lessons with additional revision resources by clicking on the purple boxes of this document. Each video lesson contains resources including summary notes, key area questions, quizes and BBC Bitesize links.



You can also access a weekly online study support session from eSgoil by registering using the following link:



### Live Study Support

Tuesday @ 5pm or Wednesday @ 6pm Click to register!



With any revision programme, it is important to start early and give yourself plenty of time to work through the course. This pack should complement the work provided by your teacher, and remember to ask them for help with any aspect of the course you are finding challenging - they are always there to help!















### Algebraic and Trigonometric Skills

Click on the key areas below to access revision resources!

#### **Polynomials & Quadratics**

**Sketching** Quadratics

Solving Quadratic Inequalities

The Discriminant Completing the Square

The Equation of a Parabola

Intersection of Lines and **Parabolas** 

**Polynomials** and Synthetic Division

**Finding** Unknown Coefficients

Finding the Intersection of Curves

Determining the Equation of a Curve

#### **Logarithms & Exponentials**

**Evaluating** <u>Logs</u>

Rules of Logs

Solving Log **Equations** 

**Special** Number e **Experimental** Data

Graphing and Logarithmic Axes

#### **Trigonometry**

Solving Basic **Trig** Equations

Solving Quadratic **Trig Equations** 

Solving Trig Equations in Radians

Solving Tria **Equations** Using a Double Angle Compound **Angles Sine Rules** 

Compound **Angles Cosine Rules** 

















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### Algebraic and Trigonometric Skills

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#### **Wave Function**

Introduction to the Wave **Function** 

Other Forms of the Wave **Function** 

Multiple **Angles** 

Maximum and Minimum Values

Solving **Equations Using** the Wave **Function** 

#### Geometric Skills

Click on the key areas below to access revision resources!

Vectors
Not being assessed in 2021/22

Revision of Nat 5

<u>Magnitude</u> and Unit **Vectors** 

Basis Vectors

The Zero Vector

**Collinearity** 

Section Formula

Dividing a Line in a **Given Ratio** 

Scalar Product with <u>Angle</u>

**Scalar Product** Component **Form** 

<u>Angle Between</u> **Two Vectors** 





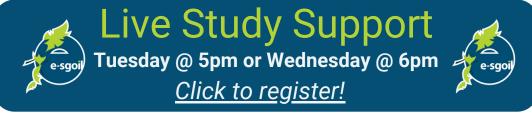












#### Calculus Skills

Click on the key areas below to access revision resources!

#### Differentiation

<u>Introduction to Differentiation</u>

**Differentiating More Complex Expressions** 

<u>Differentiating with Respect to Other Variables and Rates of Change</u>

**Equations of Tangents** 

<u>Increasing and Decreasing Curves</u>

**Stationary Points** 

Horizontal Points of Inflection

**Curve Sketching** 

**Closed Intervals** 

**Graphs of Derivatives** 

<u>Differentiating sinx and cosx</u>

The Chain Rule





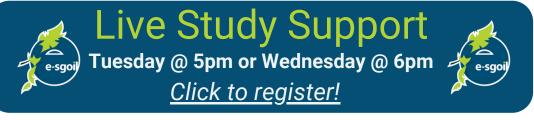












#### Calculus Skills

Click on the key areas below to access revision resources!

Integration
Introduction to Integration
<u>Preparing to Integrate</u>
<u>Differential Equations</u>
<u>Definite Integrals</u>
Area Under a Curve Part 1
Area Under a Curve Part 2
Area Between Two Curves
Integrating sinx and cosx
The Chain Rule Integration

















### Algebraic and Geometric Skills

Click on the key areas below to access revision resources!

### **Rectilinear Shapes**

Equation of a Straight Line

**Special Lines** (Horizontal, Vertical, Parallel) Gradient m=tanx

**Perpendicular** Lines

Altitude

<u>Perpendicular</u> **Bisector** 

Median

**Intersecting** Lines

Collinearity

#### **Circles**

Circle with Centre the **Origin** 

Circle with Centre (a,b)

The General Equation of a Circle

Intersection of a Line and a Circle

Equation of a Tangent to a Circle

Intersection of Circles





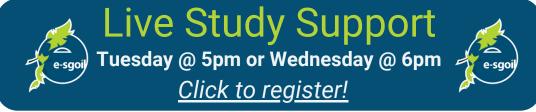












### Algebraic and Geometric Skills

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#### **Functions and Graphs**

**Translations** 

Reflections

Scaling

Composite Functions <u>Inverse</u> <u>Functions</u> Exp Log and Trig Graphs

#### **Recurrence Relations**

Not being assessed in 2021/22

Recurrence Relations
Introduction

Finding the Limit of a Recurrence Relation Finding the Value of a and b









