Leaving Certificate 2023 - Maths (H)

Masterclass with Louise Boylan

Part 1: Getting familiar with the exam paper

Two exam papers – 2·5 hours each. Worth 300 marks each.

Paper 1: 2½ hours in duration

- Number system
- Algebra
- Indices and Logarithms
- Functions
- Differential calculus
- Integration
- Complex numbers
- Proof by Induction
- Sequences and Series

Paper 2: 2½ hours in duration

- Coordinate Geometry of the Line
- Coordinate Geometry of the Circle
- Trigonometry
- Geometry
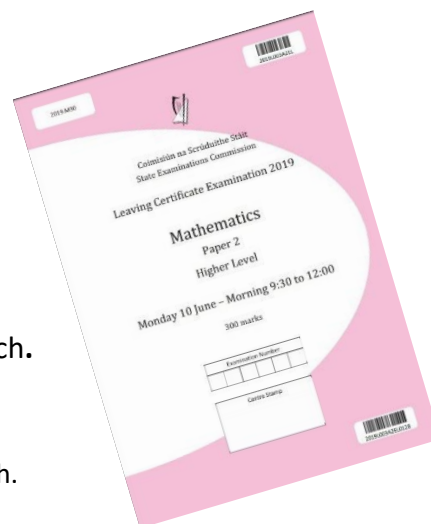- Probability
- Statistics
- Area and Volume

Each of the exam papers is broken down as follows:

Section A: Concepts and Skills (150 marks)

Answer five of six questions, worth 30 marks each.

Section B: Contexts and Applications (150 marks)

Answer three of four questions, worth 50 marks each.

Time management:

You have 150 minutes to complete a 300 mark exam, so the rule of thumb is:

MAXIMUM time to spend on a question = half of the marks for the question

Part 2:   Understanding how the exam is marked

- Be familiar with how the marking scheme is applied.

- In general, partial credit is applied for making any correct step.   The more steps you take in the right direction, the more marks you will earn.

- Usually there are very few marks going for actually getting to the final answer. The marks are earned for showing your process and workings along the way.

- If you make a mistake and bring the incorrect answer forward, you will still earn marks for using this incorrect value correctly in later parts of a question.

- There are no marks for blanks! Try something - draw a diagram to represent the information in the question, write down a relevant formula from the tables or make an effort to begin the question. Make sure that you attempt EVER question.

Part 3: How to study maths

Step 1:   Material to be learned off

Paper 1

- Prove $\sqrt{2}$ is irrational
- Construct $\sqrt{2}$ and $\sqrt{3}$
- Derive DeMoivre's Theorem
- Derive Amortisation formula
- Derive s_∞ for a geometric series
- Differentiation from first principles
    - Linear expressions
    - Quadratic expressions
- Proof by induction
    - Divisibility
    - Series
    - Inequality

Paper 2

- Constructions 1 to 22
- Geometry theorems 11, 12 and 13
- Trigonometric identities 1 to 7 and 9
- Geometry definitions
- Statistical terms

Step 2: Practice makes perfect

You need to spend a lot of time revising concepts and doing questions. But it is very important to have a plan.

Pick a topic to revise

- Go back over the main concepts and skills required

- Find some comprehensive examples. Cover, or hide, the solution and try to complete the question yourself

- Find similar questions (preferably ones you have fully worked solutions for) and try to do them again without looking at the solution

- Once you feel like you have a good handle on that topic, move onto a new one.

- BUT do not put the first topic away entirely. Every so often go back and try to do a question or two, to keep it fresh in your mind.

Step 3: How to study maths

- Break the course own into topics (Algebra, Trigonometry, etc.)

- Break each topic down into smaller sections

- Revise each section slowly but surely, starting with the basics and building up to the harder parts.

- Aim to do approximately 30 minutes of revision per day.

- Take your time. Slow and steady wins the race!

Success!