

How to get a grade B in Edexcel A level Maths

A grade B means you are secure on the standard methods across the whole course and can carry them through multi-step questions on all three papers. You don't need the final part of every hard question. You need to collect the routine marks reliably, pick up the first parts of the long questions, and stop losing marks to slips and weak presentation.

What a grade B asks of you

- Fluent, accurate algebra: indices, surds, quadratics, factorising, rearranging and algebraic fractions. Almost every question depends on it.

- Standard calculus: differentiate and integrate powers of

x

,

e^{kx}

,

$\sin kx$

,

$\cos kx$

and

$\frac{1}{x}$

, use the chain, product and quotient rules, and apply them to tangents, normals, stationary points and areas.

- Standard trigonometry and logarithms: radians, arcs and sectors, trig equations in a given interval, the main identities, and exponential equations solved with logs.

- The Paper 3 routines: binomial and normal probabilities, a correctly laid out hypothesis test, interpreting data, suvat,

$F = ma$

, connected particles and resolving on a slope.

- Clear working throughout, and a real attempt at every question, including the first parts of the long ones at the end.

Topics to secure first

- Pure foundations, because everything else uses them: quadratics and the discriminant, inequalities, the factor theorem, functions and transformations, straight lines and circles, the binomial expansion, and arithmetic and geometric series.
- Calculus, which carries a large share of the marks on Papers 1 and 2: differentiation (including the chain, product and quotient rules, tangents, normals and stationary points) and integration (including definite integrals and areas).
- Trigonometry and logarithms: radians, arcs and sectors, trig graphs, identities and equations, the laws of logarithms and solving exponential equations.
- Statistics: the binomial and normal distributions, binomial hypothesis tests, probability with Venn and tree diagrams, and interpreting data and the large data set.
- Mechanics: kinematics graphs, suvat, Newton's laws, connected particles, and forces on inclined planes.
- Then add the Year 2 methods that come up often: partial fractions, integration by substitution and by parts, parametric equations and
 $R \cos(\theta - \alpha)$

Question types to practise until they are automatic

- Multi-part Pure questions where part (a) is a 'show that' and part (b) uses the result. Practise carrying on with the printed answer when you can't do part (a).
- Trig equations with a transformed angle, such as
 $\cos 2x = 0.5$
or
 $\tan(\theta - 20^\circ) = 3$
, finding every solution in the interval.
- Area questions that combine an integral with a triangle or a trapezium.
- The full hypothesis-test layout, written the same way every time, with a conclusion in context.
- Force diagrams and
 $F = ma$
for connected particles and for objects on slopes.
- Short proofs: counter-examples and proofs using even and odd numbers.

A 10-week revision plan

- Every day (about 15 minutes): your Daily 5 and your flashcards. Keep the streak going; a little every day beats a long session once a week.
- Weeks 1 and 2: algebra and functions, coordinate geometry, sequences and series. For each subtopic, read the notes, do the worksheet and check it with the answers, then set a short Custom paper on those subtopics at Easy and Medium.
- Weeks 3 and 4: trigonometry, exponentials and logarithms, and the binomial expansion, in the same way.
- Weeks 5 and 6: differentiation, integration and numerical methods. End each week with a Medium Custom paper that mixes that week's topics with earlier ones.
- Week 7: statistics, including the large data set. Week 8: mechanics.
- Weeks 9 and 10: one timed Mock exam of each paper per week, marked strictly with the mark scheme, then redo the dropped questions from Progress.
- Tick off each skill on the grade B list in Notes as you secure it, and give any spare sessions to the subtopics Progress shows as weakest.

Using GCSE Paper Builder

- Notes: read the notes and cheatsheet for a subtopic before practising it, and use its worksheet with answers as your first check. The grade-by-grade skill lists show exactly what grade B needs, with a checklist to tick off.
- Custom paper: pick 2 to 4 subtopics, choose Easy or Medium and a short length for topic practice, and mark it with the mark scheme.
- Mock exams: full timed papers shaped like the real Papers 1, 2 and 3, for the final weeks.
- Daily 5 picks five questions a day from your weakest topics, and Flashcards use spaced repetition for identities, derivatives, integrals and hypothesis-test wording.
- Progress shows your scores by subtopic, weakest first. Redo the questions you dropped marks on until you get them right.
- Use the Whiteboard to work on screen when you practise online.
- If a topic still won't click after the notes and practice, 1-to-1 tutoring with Chhetri Academy can help, and the first 30-minute trial lesson is free.

Timing strategy in the exam

- Allow about 1.2 minutes per mark, and move faster on the routine questions early in the paper.
- If a part runs a couple of minutes over its budget, write down what you have and move on.
- Attempt the first parts of every long question. At grade B these are some of your most accessible marks.
- On Paper 3, give each section 60 minutes and stick to it.
- Keep the last 5 minutes to check that every part has an answer, in the right form, with units.

Traps at grade B

- Algebra slips: sign errors when expanding brackets, losing a negative when squaring, and mistakes with fractions and indices.
- Forgetting
 $+c$
on an indefinite integral, or the extra factor from the chain rule when differentiating or integrating
 e^{3x}
or
 $\sin 2x$
.
- Missing solutions to trig equations, or working in degrees when the question uses radians (or the other way round).
- Hypothesis tests with no context in the conclusion, or hypotheses written in terms of
 X
instead of
 p
.
- Skipping the force diagram and missing a force, especially friction or the component of weight down a slope.
- Rounding too early and missing the accuracy mark.
- Leaving long questions at the end of the paper blank, when their first parts are often straightforward.

Free notes, worksheets, practice papers and mock exams at chhetriacademy.com. Written for this site; not taken from past papers.
Stuck? 1-to-1 tutoring with a free 30-minute trial lesson.