

How to get a grade 4 in GCSE Maths Foundation (Edexcel)

Grade 4 is the standard pass, and it is the grade sixth forms, colleges, apprenticeships and employers most often ask for in maths. On the Foundation tier you get it by being quick and reliable on the core skills that fill the first half of every paper, and by picking up method marks on the longer problems further on. This plan shows what to learn first, how to spread your revision over ten weeks, and how to use this site to do it.

What a grade 4 asks of you

- Your grade comes from your total across all three papers, so a mark counts the same wherever you earn it, and a weaker paper can be made up on the others.
- Most grade 4 marks come from the short and medium questions in the first half of each paper. Dropping very few marks there matters more than cracking the hardest questions.
- You also need some marks from the second half: the first step of a multi-step problem, a correct method in a percentage or volume question, a sensible conclusion.
- Number and ratio, proportion and rates of change together carry about half of the Foundation marks, so they come first in your revision.
- You must be accurate without a calculator: Paper 1 is a third of your total.

Topics to secure first

- Number: place value and order of operations, negative numbers, written methods for the four operations, fractions of amounts and fraction arithmetic, factors, multiples and primes, squares, cubes and roots, and rounding to decimal places and significant figures.
- Ratio, proportion and rates: simplifying ratios and sharing in a ratio, recipes and best buys, percentages of amounts and percentage increase and decrease, converting metric units and times, and speed, distance and time.
- Algebra: collecting like terms, substituting into formulas, expanding a single bracket, solving linear equations, continuing sequences and finding the n th term of a linear sequence, and plotting straight-line graphs from a table of values.
- Geometry and measures: angle facts (on a line, around a point, in triangles and quadrilaterals, and with parallel lines), perimeter and area of rectangles, triangles, parallelograms, trapezia and circles, volume of cuboids and prisms, and reflections, rotations and translations.
- Probability and statistics: the probability scale and probabilities that add up to 1, listing outcomes, mean, median, mode and range from lists and frequency tables, and reading and drawing bar charts, pictograms and pie charts.
- Use the grade-by-grade skill lists in Notes as your checklist: tick off every skill up to grade 4 as you secure it, and start with the ones you can't tick yet.

Question types to master

- Money problems: bills, wages, best buys and 'Does he have enough money?' questions, finished with a sentence that answers the question.
- Fractions and percentages of amounts without a calculator, e.g. $\frac{3}{8}$ of £56 or 35% of 240.
- Sharing in a ratio, including questions that give you one share, or the difference between two shares, instead of the total.
- Angle questions where you must give reasons, using the exact angle facts.
- Area of compound shapes, and problems that turn an area into a cost or a number of packs.
- Completing a table of values and plotting a straight line, and reading values from conversion graphs and distance–time graphs.
- Mean from a frequency table: multiply each value by its frequency, add the results, then divide by the total frequency.
- n th term questions, including 'Is 100 a term of this sequence? Give a reason.'

Revision week by week (10 weeks)

- Aim for about three to four hours a week: Daily 5 every day, two or three 45-minute topic sessions and one timed practice. Stretch or squeeze the weeks to fit the time you have.
- Week 1: sit a full Paper 1 mock under exam conditions. Use Progress and the grade 4 checklist in Notes to list your weakest topics.
- Week 2: number without a calculator: written methods, order of operations, negative numbers, place value and rounding.
- Week 3: fractions, decimals and percentages, including converting between them and percentage change.
- Week 4: ratio and proportion: sharing, recipes, best buys, unit conversions, and speed, distance and time.
- Week 5: sit a Paper 2 mock. Then algebra basics: simplifying, substituting, expanding a bracket and solving linear equations.
- Week 6: sequences and the n th term, straight-line graphs and real-life graphs.
- Week 7: geometry: angle facts with reasons, polygons, perimeter and area, circles and the volume of prisms.
- Week 8: statistics and probability: averages and range, charts and tables, probability of single events and listing outcomes.
- Week 9: sit a Paper 3 mock. Redo every question you dropped marks on, then spend the rest of the week on your three weakest subtopics.
- Week 10: a full paper every two or three days, alternating non-calculator and calculator, with a daily look at your cheatsheets and flashcards.

How to use this website

- Notes: for each topic, read the notes, do the worksheet and check your answers. Keep the cheatsheets for revising formulas and facts before each paper.
- Custom paper: pick the two or three subtopics you revised that week, start on Easy and move to Medium once you are confident, and choose a length you can finish in 20 to 30 minutes. Mark it with the mark scheme.
- Mock exams: full papers shaped like the real ones, and timed. Sit the Paper 1 mock without a calculator and in one sitting.
- Daily 5: five questions every day from your weakest topics. Keeping the streak going does more than the occasional long session.
- Flashcards: angle facts, area formulas, unit conversions and fraction, decimal and percentage equivalents. Spaced repetition brings back the cards you keep forgetting.
- Progress: work on the subtopics at the top of the list (your weakest first), and redo the questions you dropped marks on until you get them fully right.
- Whiteboard: write your working on screen the way you would on the paper, so you practise setting it out for method marks.
- Tutoring: if a topic still doesn't click after the notes and worksheet, book the free 30-minute trial lesson with Chhetri Academy for 1-to-1 help.

Timing strategy in the exam

- Budget about a minute a mark. The first half of the paper should take you less than half the time, which leaves longer for the problems at the end.
- Don't rush the early questions: they are the marks a grade 4 depends on, and a careless slip there costs as much as a hard question later.
- In the second half, attempt every question: write the formula, the first calculation or a labelled diagram. Method and process marks add up.
- If you are stuck for more than a couple of minutes, mark the question and move on. Come back once you have reached the end.
- Keep the last 10 minutes to check the first half of the paper and fill in anything you left blank.

Traps at grade 4

- Order of operations: $3 + 4 \times 2$ is 11, not 14.
- Percentage change: divide the change by the original amount, not the new one.
- Ratio: divide the total by the total number of parts. £60 shared in the ratio 2 : 3 is $60 \div 5 = £12$ per part, so £24 and £36.
- Negative numbers: $-3 - 5 = -8$, and $-4 \times -2 = 8$.
- Mixing up area and perimeter, or using the diameter where the formula needs the radius.
- Units: mixing centimetres and metres, or writing 1.5 hours as 1 hour 50 minutes.
- Misreading scales: work out what each small division is worth before you read the value.
- Writing a probability as a ratio or as '3 out of 10' instead of a fraction, decimal or percentage.
- Doing the calculation but not answering the question, e.g. finding the total cost but not saying whether she can afford it.
- Informal angle reasons such as 'Z angles' instead of 'alternate angles are equal'.

The last two weeks and the exam days

- Stop starting new topics. Do mixed practice: Daily 5, a timed paper every two or three days, and a redo of anything you got wrong.
- The day before each paper, read the cheatsheets for your weakest topics and flick through your flashcards, then rest.
- Before Paper 1, do a few written calculations; before Papers 2 and 3, check your calculator is in degrees and has a good battery.
- After each paper, don't dwell on it: your grade comes from the total of all three, so put your energy into the next one.

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Stuck? 1-to-1 tutoring with a free 30-minute trial lesson.