AQA
A Level Maths
Course Guide

NEW for 2018: Bridging Editions

Student Books updated for 2018 Large Data Set (Car Data)
A Level Maths has changed...

In 2017 the new linear A Level was taught for the first time, and your students sat the new GCSE 9-1 exams for the first time.

Oxford has taken the data and experience from these changes to create exciting NEW Bridging Editions: Student Books that offer complete coverage of the new AQA A Level specification, including dedicated bridging units at the start of Year 1 chapters to provide the perfect springboard from the new GCSE to the new A Level.

- New Bridging Editions help overcome the challenge of preparing students for A Level
- Each Bridging Edition covers Pure Maths, Mechanics, and Statistics, providing the flexibility you need for co-teaching AS and A Level
- Written by a team of experienced teachers led by former Head Teacher, David Baker
- Provides updated support for AQA’s new 2018 Large Data Set (Car Data)

Find out more
- For our extensive problem-solving support: see pages 5–7
- For our support for all kinds of assessment on Kerboodle: see pages 11–12
- For our bespoke resources supporting mechanics and statistics (now compulsory in the new specification) see pages 2 and 9–10
- To learn more about direct links to MyMaths: see pages 2 and 9–10
- To learn how you can reveal answers to your class on Kerboodle, one step at a time, see pages 8 and 11–12

AQA A Level Maths Year 1 / AS
Student Book: Bridging Edition
978 019 843642 3

AQA A Level Maths Year 1 & 2
Student Book: Bridging Edition
978 019 843644 7

Order your inspection copies free for 30 days
Fill out and return the tear-off strip at the back of this guide today to order your inspection copies.

AQA A Level Maths course structure and ordering details

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<td>AQA A Level Exam Practice Book (pack of 10) 978 019 841626 9</td>
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Previous editions of the Student Books continue to be available:
- Year 1 / AS Student Book 978 019 841295 3
- Year 2 Student Book 978 019 841296 0
- Year 1+2 Student Book 978 019 841294 6

All Student Books have been approved by AQA. All other resources are not part of the AQA approval process.

Find out more
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Additional support for Mechanics and Statistics
If you’re a non-specialist Mechanics or Statistics teacher, or just looking for some extra support, we’ve got bespoke resources for you and your students.

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Online resources
Supporting teaching and learning in the classroom and at home.

Kerboodle
Digital Books and online practice 978 019 841310 3
More details on pages 11–12
Kerboodle includes direct links to...

MyMaths
Includes full support for the Large data set
Example 1

Try It

15.0 cm = 6 = 9

Example 2

For example, when solving more complicated equations involving exponentials. You can also use this technique of converting exponentials to logarithms of an exponential.

Example 7

Copy and complete the table of values and plot, for each graph.

Bridging Exercise Topic A

1. Solve each of these equations, giving your answers to 3 significant figures where appropriate.

Bridging Exercise Topic B

1. Use the sine rule to find the length of the side labelled a in each of these triangles.

2. Use the cosine rule to find the length of the side labelled a in each of these triangles.

3. Use the cosine rule to find the length of the side labelled a in each of these triangles.

4. Use the cosine rule to find the length of the side labelled a in each of these triangles.

5. Use the sine rule to find the length of the side labelled a in each of these triangles.

6. Find the length of the side labelled a in each of these triangles.

7. Find the length of the side labelled a in each of these triangles.

8. Find the area of each of these triangles in question 8.

For a reminder of laws of indices, see Bridging Unit 6. A reminder of laws of log of an exponential.

Sine rule: \( \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} \)

Cosine rule: \( a^2 = b^2 + c^2 - 2bc \cos A \)

Fluency and problem-solving questions in these chapters offer students the chance to review skills from GCSE and start to use the skills they need at A Level.

Bridging exercises include a selection of questions assessing fluency and skills (AO1).

Succinct explanations are used to prompt students to recall their GCSE knowledge.

Questions increase in difficulty in small steps.
The population of a particular species of mushroom is modelled by the equation $y = 500e^{0.2t}$, where $t$ is the time in days since the fungus was introduced to an area.

1. Calculate the auditorium is at the point $x = 1$.
2. The value of $y$ at the point $x = 0.5$.
3. The value of $y$ at the point $x = 2$.
4. The number of mushrooms predicted to be present after 15 days.
5. The number of mushrooms predicted to be present after 20 days.
In 2018 AQA introduced a new Large Data Set (Car Data) for 1st examination in 2019 (A Level) and 2020 (A Level). Questions, worked examples and fact boxes in the new Bridging Editions fully support this new data set.

Easily accessible Student Book answers

We know it’s important for you and your students to have easy access to the answers for the Student Book questions, so we have provided three options for you:

1. Short answers are available in the back of the books for quick reference.

2. Full step-by-step solutions are available FREE ONLINE and can be downloaded in an easily printable format.

Visit www.oxfordsecondary.co.uk/aqalevelmaths-answers

3. Kerboodle users have access to step-by-step solutions with a ‘stepped-reveal’ function to uncover one line of working at a time - perfect for working through problems at home or on the whiteboard in-class. Teachers can control student access to this function.

Find out more about our Kerboodle Online Resources on pages 11-12.
You can test the probability of success in a binomial distribution.

The test statistic is inside the critical region, and you reject the null hypothesis. This error is less likely to occur. That is, if you do reject the null hypothesis, the critical value is 10.

If you wish to perform a one-tailed test at the 5% significance level, you see if a coin is biased. To test if a coin is fair, you can use a two-tailed or a one-tailed test.

The probability of 'heads' is the set of values of the random variable that are sufficiently unlikely to occur under the null hypothesis. The critical value is the boundary of the critical region. Precisely how unlikely is determined by the given significance level.

The null hypothesis, $H_0$, is true. If the test statistic is inside the critical region, then you reject the null hypothesis. The critical error is less likely to occur. That is, if you do reject the null hypothesis, the critical value is 10.

That is the critical value is 10. Suppose you wish to perform a one-tailed test at the 5% significance level to see if a coin is biased.

To test if a coin is fair, you can use a two-tailed or a one-tailed test.

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Online resources

AQA A Level Maths Online Resources are available via Kerboodle and provide you with complete support for digital practice and assessment. One annual subscription allows you and your students unlimited school and home access and includes digital editions of the A Level Maths and A Level Further Maths Student Books.

Auto-marked Test

On-screen auto-marked tests give your students meaningful feedback and hints.

Mock exam paper

In addition to the Exam Practice Books, there are three full sets of practice papers for both AS and A Level available to download from Kerboodle.

InvisiPen worked example video

Unique ‘InvisiPen’ worked example videos that talk through exam-style questions with model answers.

Step-by-step solutions

Step-by-step solutions to all Student Book questions. Unique ‘stepped-reveal’ functionality allows the user to reveal one line of working at a time, making it perfect for working through problems at home or on the whiteboard.

Don’t miss:
Oxford’s unique and hugely popular ‘stepped reveal’ tool for answers.

All videos, activities and assessments for Years 1 and 2 of A Level are NOW LIVE!

Excellent value: access at home and in the classroom for unlimited users. See order form for details.

All Kerboodle subscribers have access to digital trainings - in school, via webinars, and through our helpdesk - at no additional cost.

Kerboodle resources include digital editions of the Student Books with hotspots linking directly to ‘Invisipen’ worked example videos and MyMaths resources.

AQA A Level Maths digital editions link directly to corresponding MyMaths Lessons and Online Homeworks for further practice and support for your students. MyMaths.co.uk has been updated with new lessons to support the new A Level curriculum.

All Student Books have been approved by AQA. All other resources are not part of the AQA approval process.
A Level Further Maths Structure chart and ordering details

Available as digital books on Kerboodle, Further Maths Student Books will also have step by step solutions for all questions available free on our website.

The Year 1/AS Level Student Book is approved by AQA. The Year 2 Student Book has entered the AQA approval process.

Our Student Books for Further Maths provide support and flexibility for all the AQA papers covering Further Pure, Statistics, Mechanics and Discrete Maths. As with our A Level Maths Student Books, the explanations throughout are clear and concise, with an emphasis on visual presentation, worked examples and learning-by-doing. Dedicated exercises in every chapter provide practice for the problem-solving questions.

The Student Book has been approved by AQA* and has been developed specifically for AQA’s new qualifications. The new Workbook provides short revision activities and two complete sets of practice exam papers.

Order your AQA A Level Maths Student Book inspection copies today – free for 30 days

To reflect the new standalone A5 and linear A Level exams, you can choose from a single A Level textbook, or separate AS / Year 1 and Year 2 student books. Each covers the AQA specification for Further Pure, Mechanics, Statistics and Discrete Maths, providing the flexibility you need for co-teaching AS and A Level.

Available now for AQA’s new Level 3 Mathematical Studies (Core Maths) qualification

Designed to build students’ confidence and fluency in applying and extending their GCSE maths knowledge, through engaging contexts relevant to a wide range of other post-16 subjects. The Student Book has been approved by AQA and has been specifically developed for AQA’s new qualification. The new Workbook provides short revision activities and two complete sets of practice exam papers.

*The Student Book has been approved by AQA. The Workbook has not been entered into the AQA approval process.
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