Maths Exam Revision Session

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Session aims:

- To understand the breakdown of the Maths GCSE exams
- To know how to revise for your Maths GCSE exam
- To understand what the examiners are looking for

GCSE Maths Exams

- Two tiers – Higher and Foundation
- Both tiers sit 3 exam papers – Paper 1 non-calculator, Paper 2 and 3 calculator
- All papers are 1 hour 30 minutes

Topic Area	Foundation Tier (%)	Higher Tier (%)
Number	25	15
Algebra	20	30
Ratio	25	20
Geometry	15	20
Probability and statistics (combined)	15	15

Grade boundaries

- Grade boundaries are subject to change but they are increasing.

GCSE Mathematics (9-1) Grade Boundaries Summer 2017–2023 Higher Tier

AQA	Max	9	8	7	6	5	4	3
Summer 2017	240	189	157	125	98	72	46	33
Summer 2018	240	201	169	138	107	77	47	32
Summer 2019	240	206	171	136	105	74	43	27
Summer 2022	240	214	185	156	121	86	51	33
Summer 2023	**240**	**214**	**186**	**158**	**125**	**92**	**59**	**42**

GCSE Mathematics (9-1) Grade Boundaries Summer 2017–2023 Foundation Tier

AQA	Max	5	4	3	2	1
Summer 2017	240	156	124	91	59	27
Summer 2018	240	161	125	92	59	27
Summer 2019	240	157	122	89	57	25
Summer 2022	240	172	135	101	67	33
Summer 2023	**240**	**189**	**158**	**117**	**76**	**35**

- For Summer 2023 we expect around $\frac{65}{80}$ marks for a grade 5 on foundation and around $\frac{30}{80}$ for a grade 5 on higher.


CRACK
THE
CODE

The word "hundred" is actually derived from the Old Norse word "hundrath," which actually means 120, not 100. More specifically, "hundrath," in Old Norse, means "long hundred," which equals 120, due to the duodecimal system.
Have you ever heard that the number 9 is considered to be a "magic" number? No? Well it is, and here is why: if you multiply a number by 9 and add all the digits of the new number together, the sum will always add up to 9.
The idea of zero as a number was invented throughout the world at different times in history. Despite this scattered adoption, it's generally accepted that the Indian astronomer and mathematician Brahmagupta brought up the concept of zero for the first time, around 600 A.D.
Mathematically, an even number is one that can be divided by two and still create a whole number. Zero meets the criteria for this because if you halve zero, you get zero.
Have you ever heard that the number 9 is considered to be a "magic" number? No? Well it is, and here is why: if you multiply a number by 9 and add all the digits of the new number together, the sum will always add up to 9.
To count from 1 to 90 would take you about forty-five seconds. This is a very rough estimate, based on a speaking rate of half a second every third order of magnitude. If you speak quickly, you could probably say any randomly-chosen number between one and a thousand in around half a second. Very big numbers obviously take longer to say, so we add half a second for every extra x1000. (We do not count involuntary pauses, bathroom breaks or the necessity of sleep in our calculation!)
Have you ever picked up a Rubik's Cube and struggled away at it for hours on end? It turns out that a Rubik's Cube can always be solved in 20 moves or less, no matter how mixed up it is!
2 (two) is a number, numeral and digit. It is the natural number following 1 and preceding 3. It is the smallest and only even prime number. Because it forms the basis of a duality, it has religious and spiritual significance in many cultures.
The Pythagoreans called the number nine the "Ennead".
7 is the only prime number preceding a cube. As an early prime number in the series of positive integers, the number seven has greatly symbolic associations in religion, mythology, superstition and philosophy. The seven Classical planets resulted in seven being the number of days in a week.
The seven Classical planets resulted in seven being the number of days in a week. It is often considered lucky in Western culture and is often seen as highly symbolic.
Take the numbers from statements 10, 5 and the last two digits of statement 1.

Solve:
$2x + 50 = 90$

Evaluate:
$\sqrt{400}$

Calculate the mode:
20 20 60 20 20 70
80 90 20 75 50 100

$\frac{1}{2}\ of\ 40$

10% of 200

How many degrees in a right angle?

(3 + 6) x 10

10% of 900

Find the median
30 50 90 100 120

Convert 0.9 into a percentage.

Round 87 to nearest 10

Take the numbers from statements 10, 5 and the last two digits of statement 1.

Use the numbers from your questions

7	9	0	0
2	0	9	0

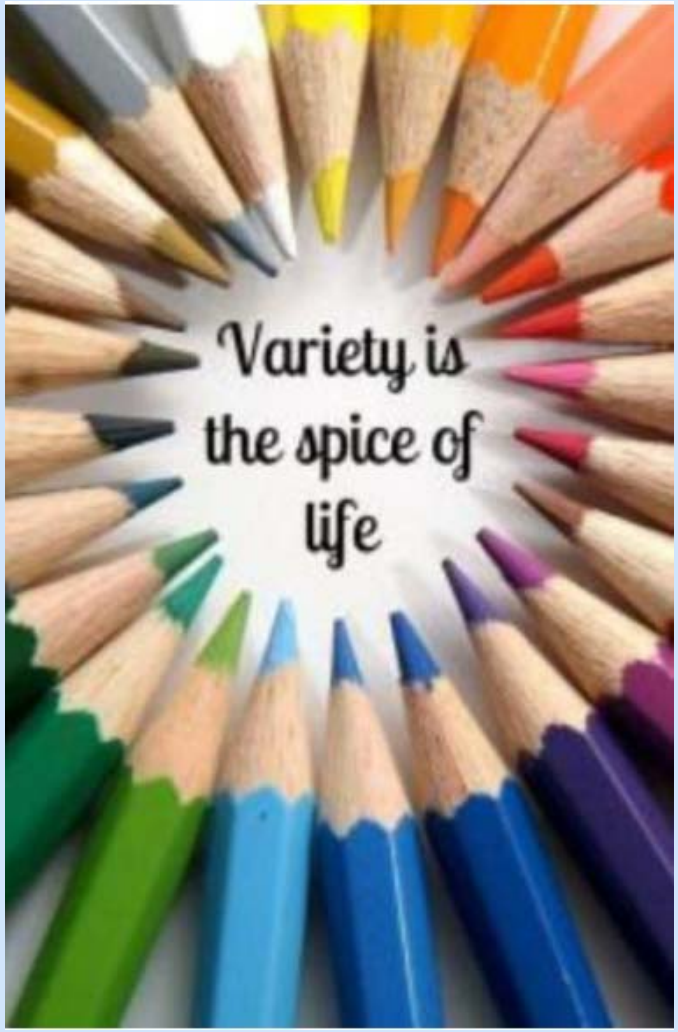
The best way to revise GCSE Maths is to DO lots of Maths

To get good at Maths, you need to do LOTS of practice.
You may need to do a bit of reading or watching videos to get started, but spend as much time as you can actually attempting questions.

Revise lots of different topics in rotation

Try to revise GCSE Maths for a short time every day so that you keep a variety of topics fresh in your mind.

Corbettmaths 5-a-day is perfect for this, with sets of questions at several levels ranging from basic numeracy to the top GCSE grades, covering every day for an entire year.



Try some exam questions, fill in the gaps, then go back and try again

When you've attempted a few questions, compare your answers with the solutions or mark schemes and try to work out what mistakes you made.

(But bear in mind that the solutions provided are not necessarily the only correct approach; there may be five or six possible ways of answering a question.

Maths Genie

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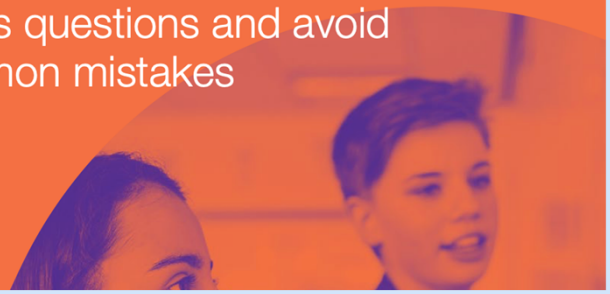
AQA
Realising potential

Exploring common misunderstandings in GCSE Maths

How to read and approach maths questions and avoid common mistakes



Help prepare your GCSE students with confidence

Confusing of and off

Thinking we've made a mistake on the paper

Misreading the question

Different meanings of the word 'estimate'

Unnecessary evaluation of indices

Simplifying fully or factorising fully

The number of marks doesn't equal the number of correct values

Not taking hints when we give them

Using ruler and compasses

Assuming things are true that are not

Not taking hints when we give them

There are several ways that we display questions to help save students time and unnecessary work, but they don't always realise.

Date	Description	Credit (£)	Debit (£)	Balance (£)
13/12/2016	Starting balance			212.48
14/12/2016	Council tax		128.39	_____
15/12/2016	Salary	856.21		_____

Complete the bank statement.

[2 marks]

.....

Top tip

If it's greyed out, it's not needed.

Key considerations

Bank statement questions are quite common in our papers. Students only need to write in the white, blank cells.

Your turn – understanding the mark scheme

Here is a bank statement with three missing values.

Date	Description	Credit (£)	Debit (£)	Balance (£)
	Starting balance			37.60
13/04/2017	Salary	.....		324.85
14/04/2017	Gas bill		50.00	.....
17/04/2017	Council tax		61.84	.....

Complete the bank statement.

Your turn – understanding the mark scheme

Glossary for Mark Schemes

GCSE examinations are marked in such a way as to award positive achievement wherever possible. Thus, for GCSE Mathematics papers, marks are awarded under various categories.

If a student uses a method which is not explicitly covered by the mark scheme the same principles of marking should be applied. Credit should be given to any valid methods. Examiners should seek advice from their senior examiner if in any doubt.

M	Method marks are awarded for a correct method which could lead to a correct answer.
A	Accuracy marks are awarded when following on from a correct method. It is not necessary to always see the method. This can be implied.
B	Marks awarded independent of method.
ft	Follow through marks. Marks awarded for correct working following a mistake in an earlier step.
SC	Special case. Marks awarded for a common misinterpretation which has some mathematical worth.
M dep	A method mark dependent on a previous method mark being awarded.
B dep	A mark that can only be awarded if a previous independent mark has been awarded.
oe	Or equivalent. Accept answers that are equivalent. eg accept 0.5 as well as $\frac{1}{2}$
[a, b]	Accept values between a and b inclusive.
[a, b)	Accept values $a \leqslant$ value $< b$
3.14…	Accept answers which begin 3.14 eg 3.14, 3.142, 3.1416
Use of brackets	It is not necessary to see the bracketed work to award the marks.

Here is a bank statement with three missing values.

Date	Description	Credit (£)	Debit (£)	Balance (£)
	Starting balance			37.60
13/04/2017	Salary	.....		324.85
14/04/2017	Gas bill		50.00	.....
17/04/2017	Council tax		61.84	.....

Complete the bank statement.

(£)287.25 **B1**

(£)274.85 **B1**

(£)213.01 *ft their (£)274.85 − 61.84* **B1ft**