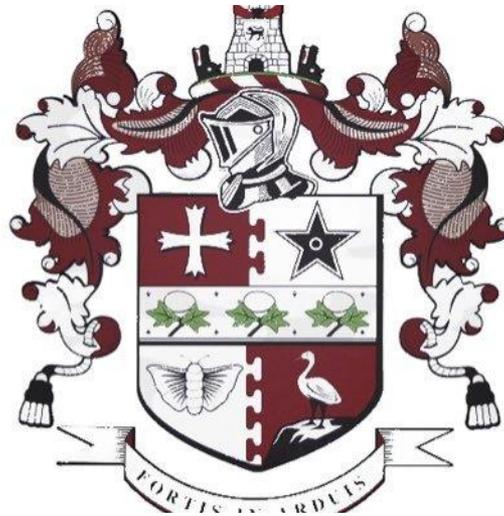


Key Stage 4 Mathematics



Key changes to the Maths curriculum

GCSE Maths has changed and is more demanding for everyone.

There is more content to teach with **harder topics being introduced**.

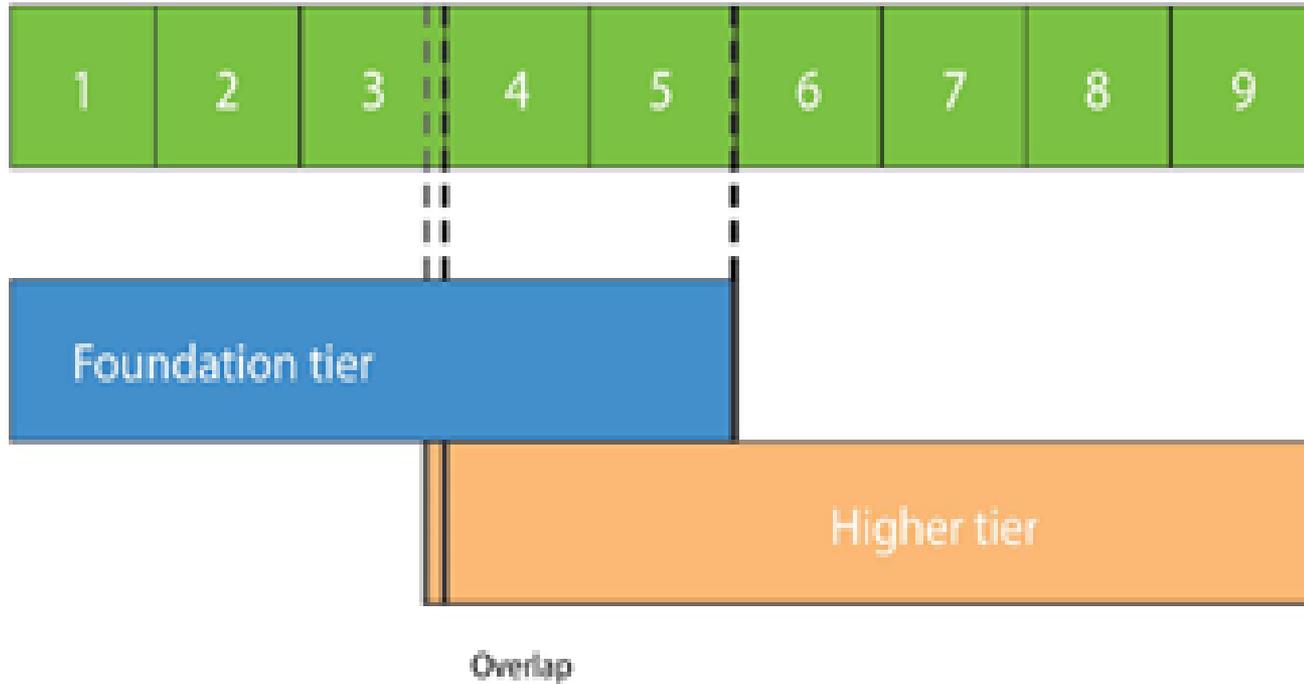
There is a **greater emphasis on problem-solving and mathematical reasoning**, with more marks in the GCSE exams being allocated to these higher-order skills.

The **total examination time has increased**. Students now sit 3 exams which are all taken at the end of the course. 1 non- calculator paper and 2 calculator papers – all 1 hour and 30 mins.

Students have to **memorise formulae**.

There is a **new grade structure from 9 to 1**.

Grades



How to support your child with their Maths GCSE

***It's a
Marathon
not
a Sprint.***

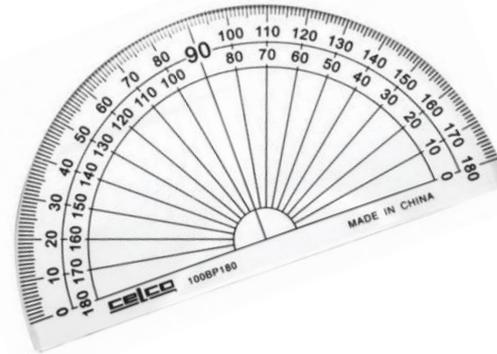
Be positive about maths!

“I can’t do maths”

“I was never any good at maths at school”

“It’s all changed since I was at school”

Equipment – Make sure your child is prepared for every maths lesson



Formulae – they need to know all the formulae off by heart

Edexcel GCSE (9-1) Maths: need-to-know formulae
www.edexcel.com/gcsemathsformulae

Areas

Rectangle = $l \times w$



Parallelogram = $b \times h$



Triangle = $\frac{1}{2} b \times h$



Trapezium = $\frac{1}{2} (a + b)h$



Volumes

Cuboid = $l \times w \times h$



Prism = area of cross section \times length



Cylinder = $\pi r^2 h$



Pyramid = $\frac{1}{3} \times$ area of base \times h



Circles

Circumference = $n \times$ diameter, $C = n\pi d$

Circumference = $2 \times n \times$ radius, $C = 2n\pi r$

Area of a circle = $n \times$ radius squared, $A = n\pi r^2$



Compound measures

Speed = $\frac{\text{distance}}{\text{time}}$



Density = $\frac{\text{mass}}{\text{volume}}$



Pressure = $\frac{\text{force}}{\text{area}}$



Pythagoras

Pythagoras' Theorem
For a right-angled triangle,
 $a^2 + b^2 = c^2$



Trigonometric ratios (new to P)

$\sin x^\circ = \frac{\text{opp}}{\text{hyp}}$, $\cos x^\circ = \frac{\text{adj}}{\text{hyp}}$, $\tan x^\circ = \frac{\text{opp}}{\text{adj}}$



Quadratic equations

The Quadratic Equation
The solutions of $ax^2 + bx + c = 0$,
where $a \neq 0$, are given by $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Trigonometric formulae

Sine Rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Cosine Rule $a^2 = b^2 + c^2 - 2bc \cos A$

Area of triangle = $\frac{1}{2} ab \sin C$



Foundation tier formulae | Higher tier formulae

UETP Recycle ALWAYS LEARNING PEARSON

Basic number work – make sure they know:

Multiplication Square

X	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Times tables

Odd and even numbers

Square and cube numbers

Talk about the maths around you

Tim and three friends go on holiday together for a week.

The 4 friends will share the costs of the holiday equally.

Here are the costs of the holiday.

£1280 for 4 return plane tickets

£640 for the villa

£220 for hire of a car for the week

Work out how much Tim has to pay for his share of the costs.

The table gives information about the prices of cinema tickets.

Cinema ticket	Price
adult ticket	£7.80
child ticket	£5.80
family ticket (for 4 people)	£24.30

Mr Edwards and his 3 children go to the cinema.

It is cheaper for Mr Edwards to buy 1 family ticket rather than 4 separate tickets.

(a) How much cheaper?

Here is a list of ingredients for making 16 flapjacks.

Ingredients for 16 flapjacks

120 g butter

140 g brown sugar

250 g oats

2 tablespoons syrup

Jenny wants to make 24 flapjacks.

Work out how much of each of the ingredients she needs.

Fahima buys

2 packets of bread rolls costing £1.50 for each packet

1 bottle of ketchup costing £1.60

3 packets of sausages

Fahima pays with a £10 note.

She gets 30p change.

Fahima works out that one packet of sausages costs £2.30.

Is Fahima right?

Homework – Set on Mondays and Thursdays

- 1 written piece per week:

SKILLS CHECK

- 1 MathsWatch piece per week



<https://vle.mathswatch.co.uk>

MathsWatch – For homework and for general revision

<https://vle.mathswatch.co.uk>



Login

Username

Password

Login

View Demo

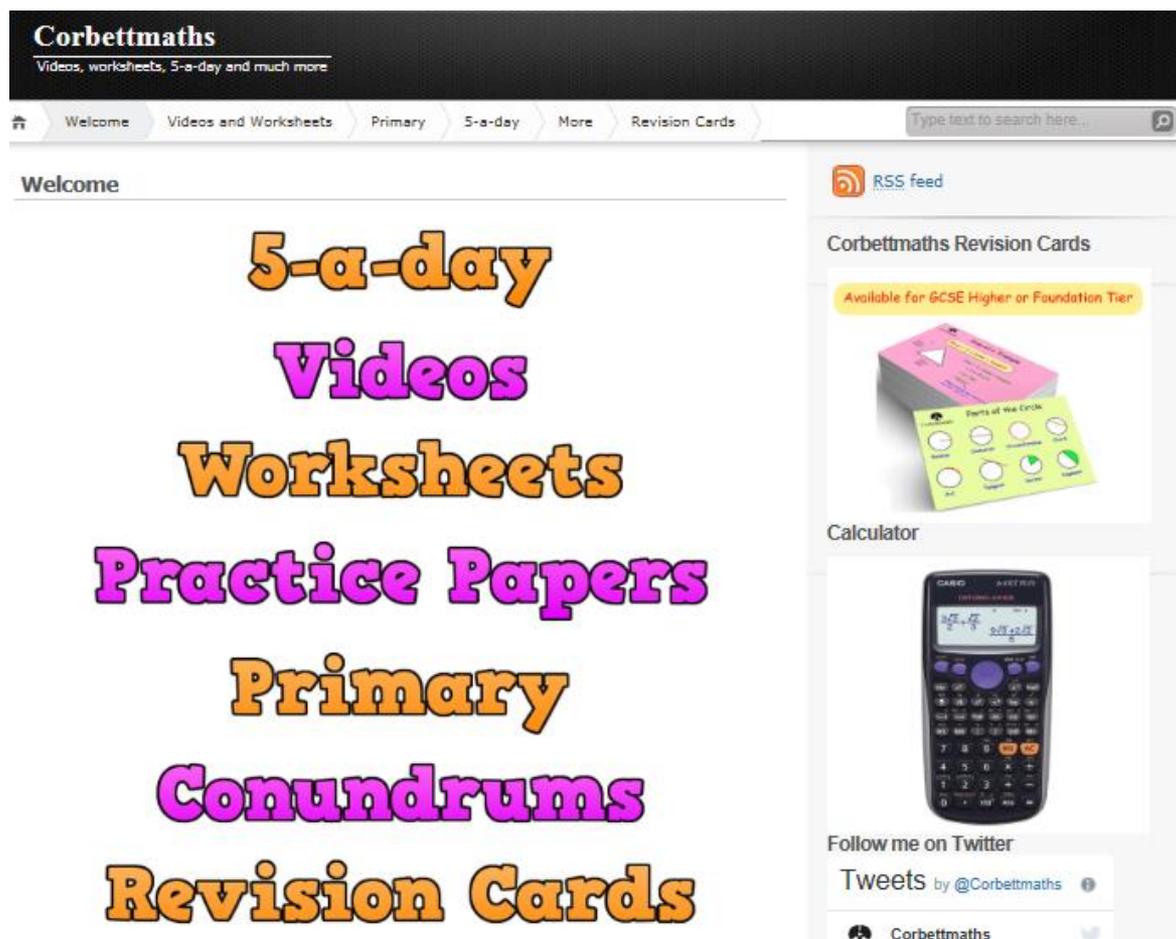
Login

MathsWatch

<https://vle.mathswatch.co.uk>

Other useful websites

www.corbettmaths.com



The screenshot shows the Corbettmaths website interface. At the top, there is a navigation bar with the site name and a search bar. Below the navigation bar, the main content area is titled 'Welcome'. Overlaid on this area is a list of resources: '5-a-day', 'Videos', 'Worksheets', 'Practice Papers', 'Primary', 'Conundrums', and 'Revision Cards'. To the right of the main content, there is a sidebar with an RSS feed section for 'Corbettmaths Revision Cards', a 'Calculator' section featuring a Casio calculator, and a 'Follow me on Twitter' section with a tweet from @Corbettmaths.

Corbettmaths
Videos, worksheets, 5-a-day and much more

Welcome

5-a-day
Videos
Worksheets
Practice Papers
Primary
Conundrums
Revision Cards

RSS feed
Corbettmaths Revision Cards
Available for GCSE Higher or Foundation Tier
Calculator
Follow me on Twitter
Tweets by @Corbettmaths
Corbettmaths

Other useful websites

Corbettmaths

Videos, worksheets, 5-a-day and much more

Home Welcome Videos and Worksheets Primary 5-a-day More Revision Cards

Type text to search here...

5-a-day GCSE 9-1

5-a-day GCSE 9-1

Numeracy – broadly designed for students aiming for Grades 1, 2 and 3.
Foundation – broadly designed for students aiming for Grades 3 and 4.
Foundation Plus – broadly designed for students aiming for Grades 4, 5 and 6.
Higher – broadly designed for students aiming for Grades 6 and 7.
Higher Plus – broadly designed for students aiming for Grades 8 and 9.

January

1st January	Numeracy	Foundation	Foundation Plus	Higher	Higher Plus
2nd January	Numeracy	Foundation	Foundation Plus	Higher	Higher Plus
3rd January	Numeracy	Foundation	Foundation Plus	Higher	Higher Plus
4th January	Numeracy	Foundation	Foundation Plus	Higher	Higher Plus
5th January	Numeracy	Foundation	Foundation Plus	Higher	Higher Plus
6th January	Numeracy	Foundation	Foundation Plus	Higher	Higher Plus
7th January	Numeracy	Foundation	Foundation Plus	Higher	Higher Plus
8th January	Numeracy	Foundation	Foundation Plus	Higher	Higher Plus
9th January	Numeracy	Foundation	Foundation Plus	Higher	Higher Plus
10th January	Numeracy	Foundation	Foundation Plus	Higher	Higher Plus

–

RSS feed

Corbettmaths Revision Cards

Available for GCSE Higher or Foundation Tier



Calculator



Follow me on Twitter

Tweets by @Corbettmaths

Other useful websites

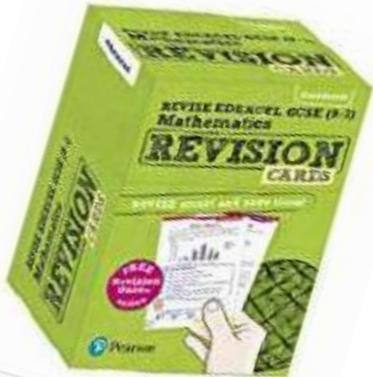
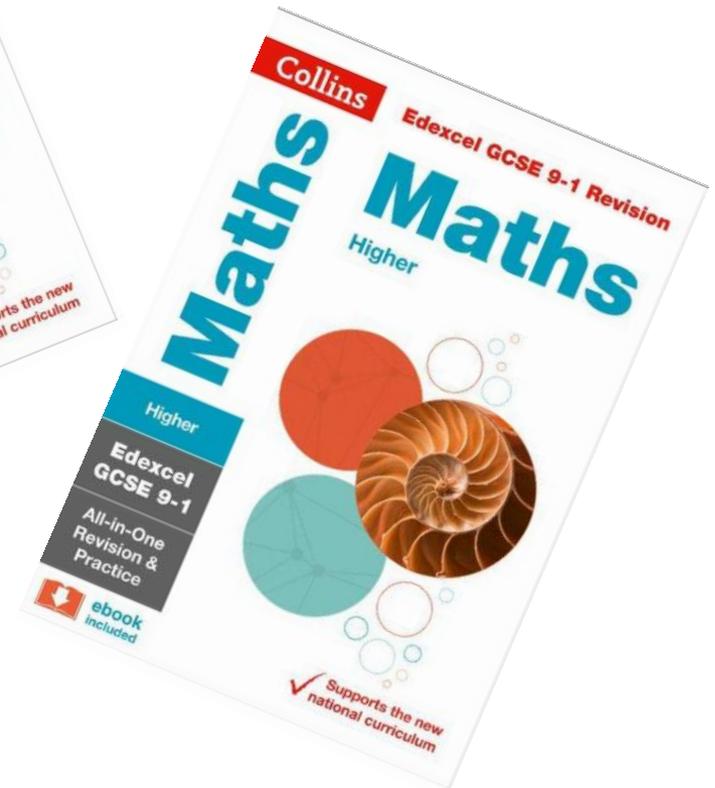
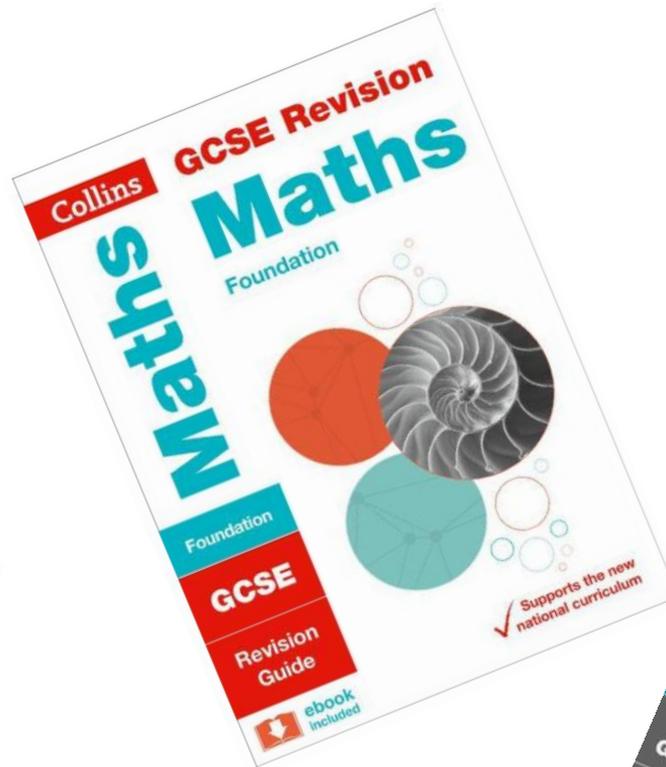
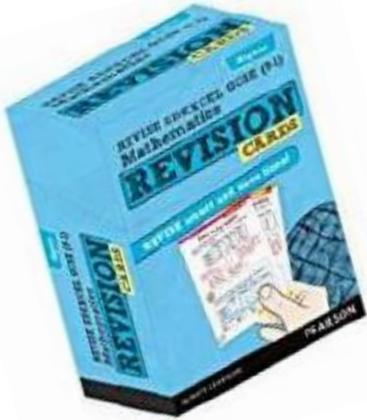
- GCSE Bitesize – Maths
- www.mathsmadeeasy.co.uk
- www.mrbartonmaths.com/students/gcse/

Key Dates

Year 10 exams:

- Week beginning 21st January 2019
- Week beginning 13th May 2019

Revision books/cards to buy/order



Old textbooks

Questions...



Contact details:

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