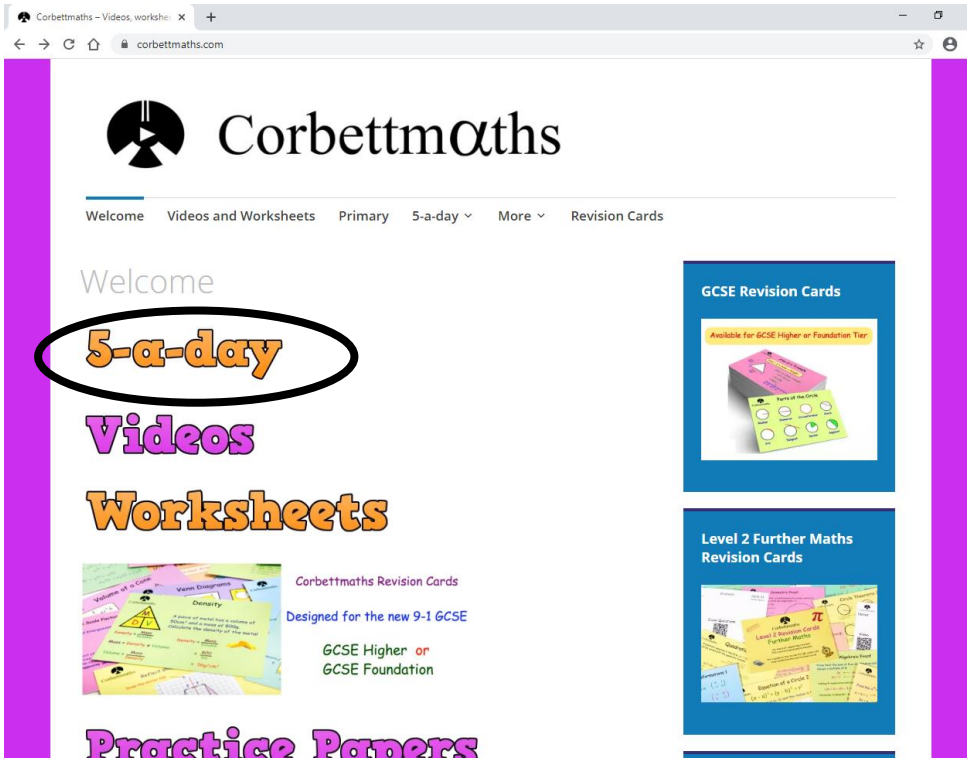
Year 11: Maths Independent Learning

Corbett Maths 5-a-day

Complete 5 questions **every day**.

To check answers:

- Go to www.corbettmaths.com



- Click on '5 a day'
- Scroll down to find '[CURRENT MONTH] ANSWERS' – click on it.
- Click on the following depending on which class you are in:
  11H1: Higher
  11H2: Higher
  11H3: Foundation Plus
  11H4: Foundation
  11H5: Foundation

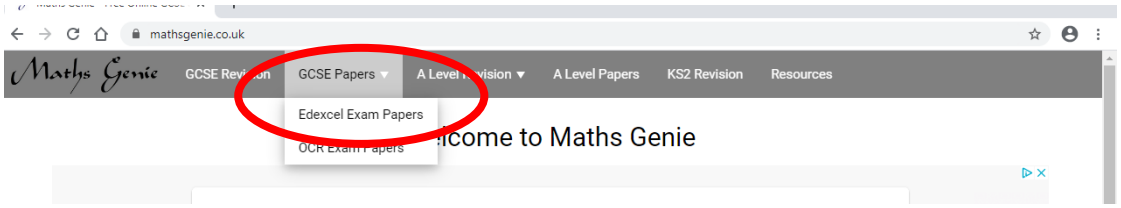
Past papers

Complete a past paper twice per week.

After you have completed the paper, you **must** check solutions and find out how to do questions that you got wrong or were unsure on.

To check solutions:

- Go to www.mathsgenie.com



- At the top of the page, click on ‘GCSE Papers’ then ‘Edexcel Exam Papers’
- Scroll down to find the past paper you have completed (it is on the front cover of the paper).
- Click ‘Solutions’ to see written solutions to the questions or ‘Video’ to see someone model & explain the solutions.

You can also access more past papers on this website if you run out!

Key Topics

Complete ‘Key Topics 9’ sheet.

Solutions will be uploaded to Show My Homework so that you can check your answers.

Year 11: Foundation (9)

Key Topics Homework

SIR THOMAS BOTELER CHURCH OF ENGLAND HIGH SCHOOL

Name:_____

MathsWatch

Q1: Ratio as fractions: **107**

Q2: Volume & surface area of 3D shapes: **114, 115, 119, 169, 170, 171**

Q3: Calculating with fractions: **71, 73, 74**

Q4: Nth term of linear (arithmetic) sequences: **102, 103**

1. Ratio as fractions

There are only black pens and green pens in a box.

The ratio of the number of black pens in the box to the number of green pens in the box is 2 : 5

What fraction of the pens are black?

2. Volume & surface area of 3D shapes

A cuboid with length 45 cm, width 20 cm and height 35 cm is completely filled with water.

The water is then poured into a larger cuboid with length 100 cm and width 15 cm.

Calculate the height of the water in the larger cuboid.

Show all your working.

3. Calculating with fractions

Work out $\frac{2}{7} + \frac{1}{5}$

4. Nth term of linear (arithmetic) sequences

Here is a sequence

40 35 30 25 20

Circle the expression for the *n*th term of the sequence.

$5n + 35$ $5n - 45$ $45 - 5n$ $n - 5$

Year 11: Higher (9)

Key Topics Homework

SIR THOMAS BOTELER CHURCH OF ENGLAND HIGH SCHOOL

Name:_____

MathsWatch

Q1: Recurring decimals: **177, 189**

Q2: Volume & surface area of 3D shapes: **114, 115, 119, 169, 170, 171, 172**

Q3: Upper & lower bounds: **132, 155, 206**

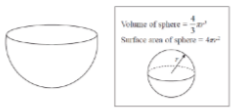
Q4: Algebraic proof: **193**

1. Recurring decimals

Express $0.\dot{7}\dot{8}$ as a fraction.

2. Volume & Surface Area of 3D Shapes

The diagram shows a solid hemisphere.



The volume of the hemisphere is $\frac{250}{3}\pi$

Work out the exact total surface area of the solid hemisphere.
Give your answer as a multiple of π.

3. Upper & lower bounds

Jim rounds a number, x, to one decimal place.

The result is 7.2

Write down the error interval for x.

4. Algebraic proof

Prove algebraically that

$(2n + 1)^2 - (2n + 1)$ is an even number

for all positive integer values of n.

Other revision resources

❖ MathsWatch

[If you have trouble logging in to MathsWatch, please e-mail fjones@boteler.org.uk - Miss Jones can reset your password and send you your login details.]

- Click on 'My Progress': select **GCSE** in 'Qualification', and **Foundation** or **Higher** in 'Tier' (11H1 & 11H2: Higher, 11H3, 11H4 & 11H5: Foundation).
  Click on a topic and either watch the video for a full explanation on the topic, or click 'One Minute Maths' above the video for a recap 1-minute video, or click 'Interactive Questions' above the video to try questions on the topic (click through the numbers at the top to go to each question).

- Click on 'My Work' then click on the 'June 19' EXAM assignments. (3 papers from the June 2019 series)
  Your answers will be marked as you go through the questions, and it will indicate your grade / how many marks are needed for the next grade.

❖ MathsGenie

- **GCSE Papers – Edexcel Papers**
  Past papers with solutions.

- **GCSE Revision**
  Videos, exam questions and solutions on topics (listed by grade).
  Foundation: grade 1 – 5.
  Higher: grade 3 – 9.

❖ Corbett Maths

- **5-a-day (GCSE 9-1)**
  5-a-day sheets for every day of the year with answers.

- **Videos and worksheets**
  Videos, worksheets, and exam question booklets on topics. [Use Ctrl & F to search for a particular topic]

- **Practice Papers (GCSE 9-1 Practice Papers)**
  Practice papers with model answers.