



**Paper 1: 16th May**

**Paper 2: 3rd June**

**Paper 3: 10th June**

### **Key information**

- The qualification consists of three equally-weighted written examination papers at either Foundation tier or Higher tier. Foundation tier: grades 1 to 5. Higher tier: grades 4 to 9 (grade 3 allowed).
- Paper 1 is a non-calculator assessment and a calculator is allowed for Paper 2 and Paper 3.
- Each paper is 1 hour and 30 minutes long.
- Each paper has 80 marks.
- The content outlined for each tier will be assessed across all three papers.
- Each paper has a range of question types; some questions will be set in both mathematical and non-mathematical contexts.
- The assessments will cover the following content headings:
  - 1) Number
  - 2) Algebra
  - 3) Ratio, proportion and rates of change
  - 4) Geometry and measures
  - 5) Probability
  - 6) Statistics

### **Top Revision Tips**

**1. Don't just read through a textbook!** The only way to revise maths is to do maths. You will do much better spending 20 minutes doing maths questions than spending two hours just reading a textbook. The more questions you do yourself, the more you will get right, the higher your confidence will be, the more you will enjoy your revision, and the better you will do in the exam.

**2. Use the internet.** The internet is like having your own personal teacher who is available for you whenever you like. There are websites that can set you questions and mark them for you and take you through step-by-step how to tackle certain topics.

Good places to find exam papers and support are:

- <https://www.mathsgenie.co.uk/>
- <https://www.youtube.com/@TheGCSEMathsTutor>
- <https://www.onmaths.com/>
- <https://corbettmaths.com/>

**3. Don't just practice the topics you can do.** If you are really good at fractions, for example, it is very tempting to keep doing lots of fractions questions. But unfortunately, the exam is probably not going to have more than one or two fractions questions. Although it can be painful, work your way through the topics that you struggle with, because it is much better to struggle on them at home, when you have time on your side and the answers available, than it is to struggle in the exam.

**4. Make sure you ask for help.** Again, once you are in the exam you are on your own, but during revision you are certainly not. If you are stuck on a topic or a question, then ask one of the people from your class, or your teacher, or someone at home or look on the internet.

**5. Practice doing questions under exam conditions.** Get someone to pick you a set of questions from your textbook, or get some from a maths website, and try doing them in silence, with no help, for a fixed amount of time. This will get you used to what it will be like in the exam, how fast you need to go, and is the best way of checking that you really understand a topic.

**6. Practice using your calculator!** All calculators work differently, and unless you have used yours for lots of different types of questions (trig, Pythagoras, negative numbers, indices), you might come stuck in the exam. Find out if there are any problems early enough to correct them!

**7. If it works for you, try revising with a friend for a bit of the time.** You will find that one of you understands one topic more, whilst the other is a bit of an expert on another. Just by explaining things to a friend, you will find that your understanding increases, and likewise you might learn a different way of thinking about and understanding a topic.

## Maths Exam Command Words

### Maths Command Words

**Estimate**  
Don't work out exactly!  
Round the numbers to one significant figure first.

Estimate  $4.7 \times 6.2$   
Answer:  $5 \times 6 = 30$

**Explain**  
You must state why.

**Work out**  
A written or mental calculation is needed.

Work out  $6^2$   
Answer:  $6 \times 6 = 36$

**Simplify**  
Collect like terms together

Simplify  $e + 7e$   
Answer:  $8e$

**Give your answer in its simplest form**  
Cancelling of a fraction or ratio is needed.

$\frac{12}{4} : \frac{15}{5}$   
simplified is  $4 : 5$

**Calculate**  
You will need to do a sum either with or without your calculator.

**Expand**  
Multiply out the brackets

Expand  $4(3x - 2)$   
Answer:  $12x - 8$

**You must show your working**  
If you don't show your working you won't get ALL the marks!

**Describe fully**  
Usually with transformations:  
Translation by a vector (2 marks)  
Enlargement of a scale factor about a point (3 marks)  
Reflection in a mirror line (2 marks)  
Rotation through an angle about a point (3 marks)

**Solve**  
Find the value of the variable in the question.

Solve:  $3x = 12$   
Answer:  $x = 4$

**Factorise**  
To find factors and put brackets in.

Factorise  $6x + 10x^2$   
Answer:  $2x(3 + 5x)$

**Sketch**  
An accurate drawing is not needed; freehand will do!

**Construct, using ruler and compasses**  
Use your ruler and pair of compasses to make an accurate drawing.

**Measure**  
Use a ruler or protractor to accurately measure lines or angles.

## Need to Know Formulae

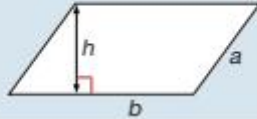
Create revision cards to test yourself and ensure you know the following formulae.

### Areas

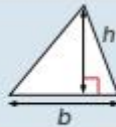
Rectangle =  $l \times w$



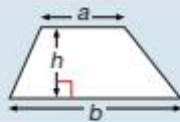
Parallelogram =  $b \times h$



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



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

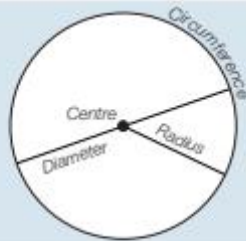


### Circles

Circumference =  $\pi \times \text{diameter}$ ,  $C = \pi d$

Circumference =  $2 \times \pi \times \text{radius}$ ,  $C = 2\pi r$

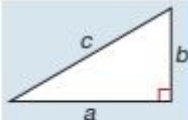
Area of a circle =  $\pi \times \text{radius squared}$ ,  $A = \pi r^2$



### Pythagoras

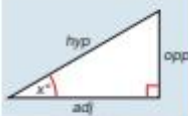
#### Pythagoras' Theorem

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



#### Trigonometric ratios (new to F)

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



### Quadratic equations

#### The Quadratic Equation

The solutions of  $ax^2 + bx + c = 0$ ,

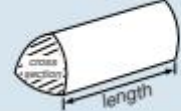
where  $a \neq 0$ , are given by  $x = \frac{-b \pm \sqrt{(b^2 - 4ac)}}{2a}$

### Volumes

Cuboid =  $l \times w \times h$



Prism = area of cross section  $\times$  length



Cylinder =  $\pi r^2 h$



Volume of pyramid =  $\frac{1}{3} \times \text{area of base} \times h$



### Compound measures

#### Speed

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



#### Density

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



#### Pressure

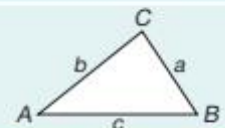
The formula for pressure does not need to be learnt, and will be given within the relevant examination questions.

### 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