# Maths

**November Mocks: 3 Papers**

Paper 1: Non-Calculator 80 marks

Paper 2: Calculator 80 marks

Paper 3: Calculator 80 marks

**Foundation Paper:**

50% Using and Applying

25% Reasoning skills

25% Problem Solving

**Higher Paper:**

40% Using and Applying

30% Reasoning skills

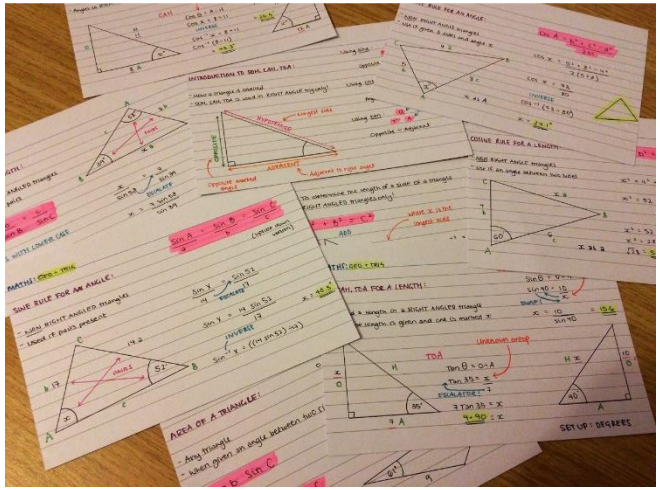
30% Problem Solving

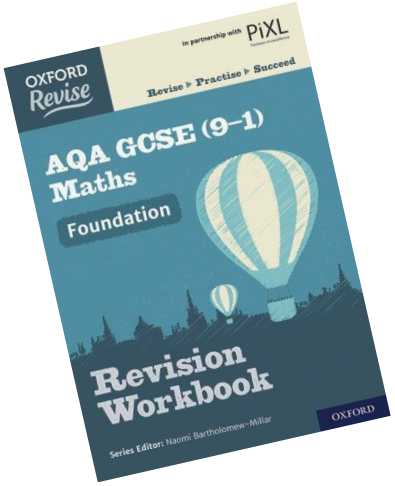
**Key Areas**

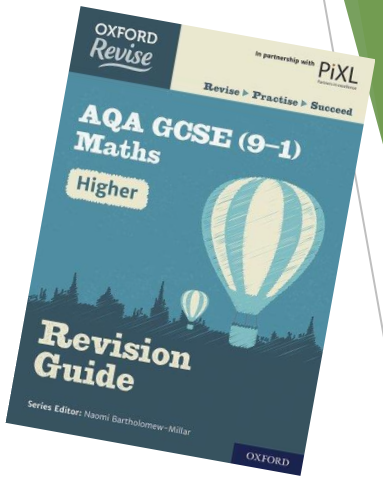
Number
Algebra
Geometry
Statistics
Ratio & Proportion

# Practice is the best revision!

Ask your teacher about Period 6!






Revision Guides

## Flash Cards

Students now have to remember more formulae for their exams.

AQA Website: www.aqa.org.uk

Past Papers and Mark Schemes available.

www.mymaths.co.uk

Login: Oakbank  Password: Obtuse

www.corbettmaths.com

Free worksheets; exam questions; videos

# Formulae for Foundation

## Formulae to Memorise

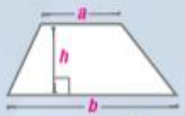
You will not be given these formulae in the exam

### Areas

Area of a rectangle = $l \times w$

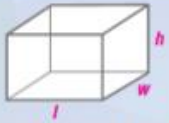
Area of a parallelogram = $b \times h$

Area of a triangle = $\frac{1}{2} b \times h$

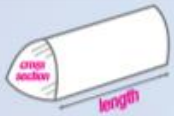



Area of a trapezium = $\frac{1}{2}(a + b)\,h$

### Volumes




Volume of a cuboid = $l \times w \times h$




Volume of a prism = area of cross section × length

Volume of a cylinder = $\pi r^2 h$

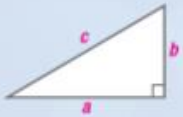
Volume of a pyramid = $\frac{1}{3}$ × area of base × $h$

### Circumference and Area of a Circle

Circumference of a circle = $2\pi r = \pi d$

Area of a circle = $\pi r^2$

### Pythagoras' Theorem




$a^2 + b^2 = c^2$

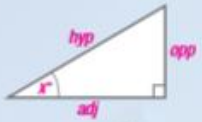
### Compound Measures

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

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

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

### Trigonometry




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

### Compound Interest*

Where $P$ is the principal amount, $r$ is the interest rate (as a percentage) over a given period and $n$ is the number of times that the interest is compounded:

Total accrued = $P\left(1+\frac{r}{100}\right)^n$

### Probability*

Where $P(A)$ is the probability of outcome $A$ and $P(B)$ is the probability of outcome $B$:

$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$

## Formulae given in the Exam

You do not need to memorise these formulae

### Volume and Surface Area

Curved surface area of a cone = $\pi r l$

Volume of a cone = $\frac{1}{3}\pi r^2 h$

Surface area of a sphere = $4\pi r^2$

Volume of a sphere = $\frac{4}{3}\pi r^3$

### Kinematics Formulae

Where $a$ is constant acceleration, $u$ is initial velocity, $v$ is final velocity, $s$ is displacement from the position when $t = 0$ and $t$ is time taken:

$v = u + at$

$s = ut + \frac{1}{2}at^2$

$v^2 = u^2 + 2as$

# Formulae for Higher

## Formulae to Memorise

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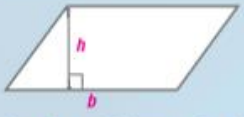
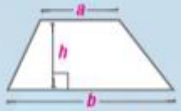
### Areas

Area of a rectangle = $l \times w$




Area of a parallelogram = $b \times h$

Area of a triangle = $\frac{1}{2} b \times h$

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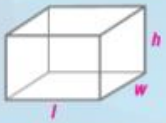


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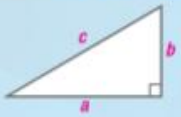


$a^2 + b^2 = c^2$

### Compound Measures

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

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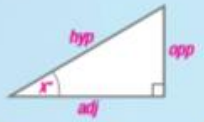
$\text{pressure} = \frac{\text{force}}{\text{area}}$

### The Quadratic Formula

The solutions of $ax^2 + bx + c = 0$, where $a \neq 0$, are given by:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

### Trigonometry

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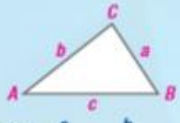


Sine Rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

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

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

### Compound Interest*

Where $P$ is the principal amount, $r$ is the interest rate (as a percentage) over a given period and $n$ is the number of times that the interest is compounded:

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$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$

Conditional Probability

$P(A \text{ and } B) = P(A \text{ given } B) \times P(B)$

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**Websites**

Mr Barton Maths
Corbett Maths
Just Maths
Mr Carter Maths
Maths Genie
Hegarty Maths
MyMaths
Diagnostic Questions
BBC Bitesize
Revision Maths
Mathsisfun
Mr Carter Maths
Mathsbot
ck12
Khan Academy
Worksheetmaths
*And many more just search for them!*

**Things you must look at**

mrbartonmaths.com/students/gcse/mr-barton-ebook.html

www.piximaths.co.uk/revision-materials

justmaths.co.uk/blog/

solvemymaths.files.wordpress.com/2016/03/gcse-resit-top-tips-pdf.pdf

**Twitter**

@tesMaths
@BetterMaths
@PixiMaths
@CorbettMaths
@MrCarterMaths
@crashMATHS_CM
*And many more just search for them!*

**Discussion Forum**

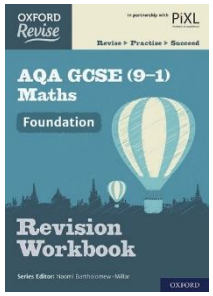
www.reddit.com/r/GCSE/

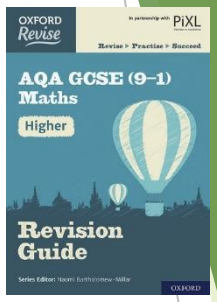
**YouTube Channels / Videos**

Corbettmaths
UKMathsteacher
Exam Solutions
Khan Academy
WCSCMaths
WrightMaths
Maths Partner
crashMATHS
Reg F Harding
Maths Genie
HegartyMaths
*And many more just search for them!*

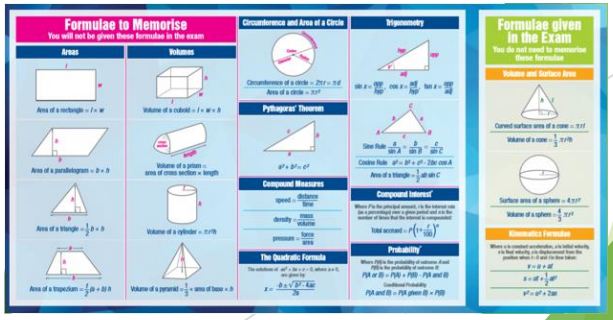
# Provided for students

Revision and Exam Workbook




Key vocabulary

List of maths websites

Formulae list to learn