

# AQA GCSE Mathematics (8300)

**5 IS A GOOD PASS**

Three assessments of 90 minutes

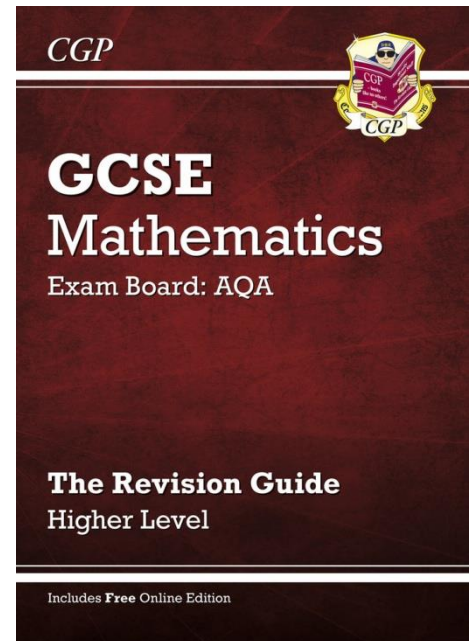
1. None Calculator – 80 marks
2. Calculator – 80 marks
3. Calculator – 80 marks

Foundation grades 1 – 5

Higher grades 4 – 9

# Maths at Wigston Academy

- 2 year plan (Unless continuation of teacher)
- Problem solving
- 1/2 termly tests
- RAG marking
- Intervention (Thursday support)
- Mastery
  
- Set is just a number!!



# Higher

## Year 10

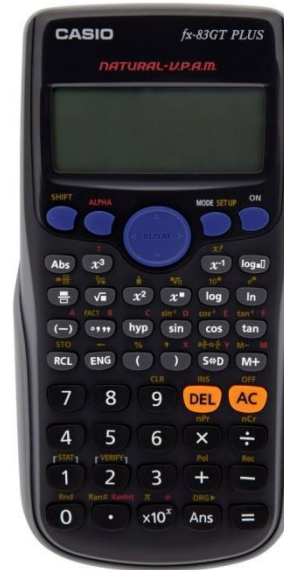
SEPTEMBER				OCTOBER				NOVEMBER			
Wk1		Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	
Number	Factors & multiples	Angles	Scale diagrams and bearings	Basic algebra review	Fractions	Perimeter and area	Review and revision 1	Holiday	Decimals	Rounding	Coordinates and linear graphs
NOVEMBER			DECEMBER				JANUARY				
Wk11		Wk12	Wk13	Wk14	Wk15	Wk16	Wk17	Wk18	Wk19	Wk20	
Collecting and representing data			Sequences	Percentages	Calculating with percentages	Review and revision 2	Holiday	Holiday	Circumference and area	Scatter graphs	
JANUARY		FEBRUARY				MARCH					
Wk21	Wk22	Wk23	Wk24	Wk25	Wk26	Wk27	Wk28	Wk29	Wk30		
Transformations	Standard form	Review and revision 3	Holiday	Ratio and proportion		Equations	Basic probability	Review and revision 4	Holiday		
APRIL				MAY				JUNE			
Wk31		Wk32	Wk33	Wk34	Wk35	Wk36	Wk37	Wk38	Wk39	Wk40	
Holiday	Constructions and loci	Congruence and similarity	Surds	2D representations of 3D shapes	Statistical measures	Indices	Review and revision 5	Holiday	Measures		
JUNE		JULY									
Wk41	Wk42	Wk43	Wk44	Wk45							
Summer examinations and revision	Summer examinations and revision	Pythagoras theorem and basic trigonometry	Real life graphs	Properties of polygons							

# Foundation

## Year 10

SEPTEMBER				OCTOBER				NOVEMBER	
<u>Wk1</u> Basic Number	<u>Wk2</u> Factors and Multiples	<u>Wk3</u> Angles	<u>Wk4</u> Scale diagrams and bearings	<u>Wk5</u> Basic Algebra	<u>Wk6</u> Fractions	<u>Wk7</u> Review and Revision 1	<u>Wk8</u> Holiday	<u>Wk9</u> Coordinates and Linear Graphs	<u>Wk10</u> Percentages Calculating with %
NOVEMBER			DECEMBER				JANUARY		
<u>Wk11</u> Decimals Rounding	<u>Wk12</u> Collecting and Representing Data	<u>Wk13</u> Sequences	<u>Wk14</u> Perimeter and Area	<u>Wk15</u> Review and Revision 2	<u>Wk16</u> Circumference and Area	<u>Wk17</u> Holiday	<u>Wk18</u> Holiday	<u>Wk19</u> Basic Probability	<u>Wk20</u> Equations
JANUARY		FEBRUARY				MARCH			
<u>Wk21</u> Ratio and Proportion	<u>Wk22</u>	<u>Wk23</u> Review and Revision 3	<u>Wk24</u> Holiday	<u>Wk25</u> Scatter Graphs	<u>Wk26</u> Transformations	<u>Wk27</u> Pythagoras' Theorem	<u>Wk28</u> 2D Representations of 3D Shapes	<u>Wk29</u> Review and Revision 4	<u>Wk30</u> Holiday
APRIL				MAY				JUNE	
<u>Wk31</u> Holiday	<u>Wk32</u> Standard Form	<u>Wk33</u> Measures	<u>Wk34</u> Statistical Measures	<u>Wk35</u> Indices	<u>Wk36</u> Constructions and Loci	<u>Wk37</u> Congruence and Similarity	<u>Wk38</u> Review and Revision 5	<u>Wk39</u> Holiday	<u>Wk40</u> Graphs recap and extension
JUNE			JULY						
<u>Wk41</u> Summer Examinations and Revision	<u>Wk42</u> Summer Examinations and Revision	<u>Wk43</u> Introduction to Trigonometry	<u>Wk44</u> Real Life Graphs	<u>Wk45</u> Properties of Polygons					

# What can you do to help?



[www.mymaths.co.uk](http://www.mymaths.co.uk)

Username – Wigston1

Password – square177

[www.hegartymaths.com](http://www.hegartymaths.com)

[www.bigbrainmaths.com](http://www.bigbrainmaths.com)

[www.studymaths.co.uk](http://www.studymaths.co.uk)

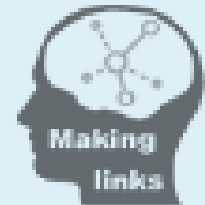
PiXL Maths APP!

Maths Support & Intervention  
Thursday 3 – 4pm.

Add or subtract fractions (different denominators)

Previously on HegartyMaths...

Generating equivalent fractions:



1st	2nd	3rd	4th	5th	6th	7th
$\frac{2}{7}$	$\frac{4}{14}$	$\frac{6}{21}$	$\frac{8}{28}$	$\frac{10}{35}$	$\frac{12}{42}$	$\frac{14}{49}$
$\frac{3}{5}$	$\frac{6}{10}$	$\frac{9}{15}$	$\frac{12}{20}$			



Evaluate

$$\frac{2}{7} + \frac{3}{5}$$

$$\frac{10}{35} + \frac{21}{35} = \frac{31}{35}$$

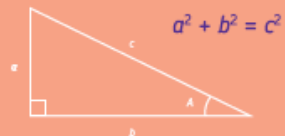


# GCSE Maths

## Formulae you'll need to know

### Pythagoras' theorem

In any right-angled triangle where  $a$ ,  $b$  and  $c$  are the length of the sides and  $c$  is the hypotenuse:



### Trigonometry formulae

In any right-angled triangle ABC where  $a$ ,  $b$  and  $c$  are the length of the sides and  $c$  is the hypotenuse:

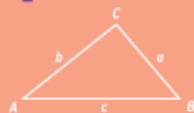
$$\sin A = \frac{a}{c} \quad \cos A = \frac{b}{c} \quad \tan A = \frac{a}{b}$$

In any triangle ABC, where  $a$ ,  $b$  and  $c$  are the length of the sides:

$$\text{sine rule: } \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\text{cosine rule: } a^2 = b^2 + c^2 - 2bc \cos A$$

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



### The quadratic formula

The solutions of  $ax^2 + bx + c = 0$  where  $a \neq 0$

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

### Circumference and area of a circle

Where  $r$  is the radius and  $d$  is the diameter:

$$\text{Circumference of a circle} = 2\pi r = \pi d$$

$$\text{Area of a circle} = \pi r^2$$

### Perimeter, area, surface area and volume formulae



Where  $a$  and  $b$  are the lengths of the parallel sides and  $h$  is their perpendicular separation:

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

$$\text{Volume of a prism} = \text{area of cross section} \times \text{length}$$

### Compound interest

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

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

### Probability

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

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

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

# StudyMaths.co.uk

GCSE maths revision

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## Formulae - GCSE Maths formulae sheet



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A list of all the formulae needed for your GCSE maths exam. Click a formula for an interactive example to show how it is used.

If you are entered for Foundation tier then you must know all the formulae marked 'F'. Higher tier students must learn the whole list!

Formula	Tier?	How to use the formula in words:	In Algebra:
Area of a Rectangle	F	Multiply the length by the width.	$A = L \times W$
Area of a Triangle	F	Multiply the base by the perpendicular height and divide by two.	$A = \frac{1}{2}bh$
Area of a Parallelogram	F	Multiply the base by the height.	$A = b \times h$



**NEW GCSE  
GRADING STRUCTURE****CURRENT GCSE  
GRADING STRUCTURE**

9

A\*

8

7

A

6

**GOOD PASS (DfE)**

B

5 and above = top of C and above

5

**AWARDING**

C

4

4 and above = bottom of C and above

3

D

2

E

1

F

G

U

U