



AIMING HIGH IN GCSE MATHS



**ACCESSING
TOP MARKS IN
MATHS**



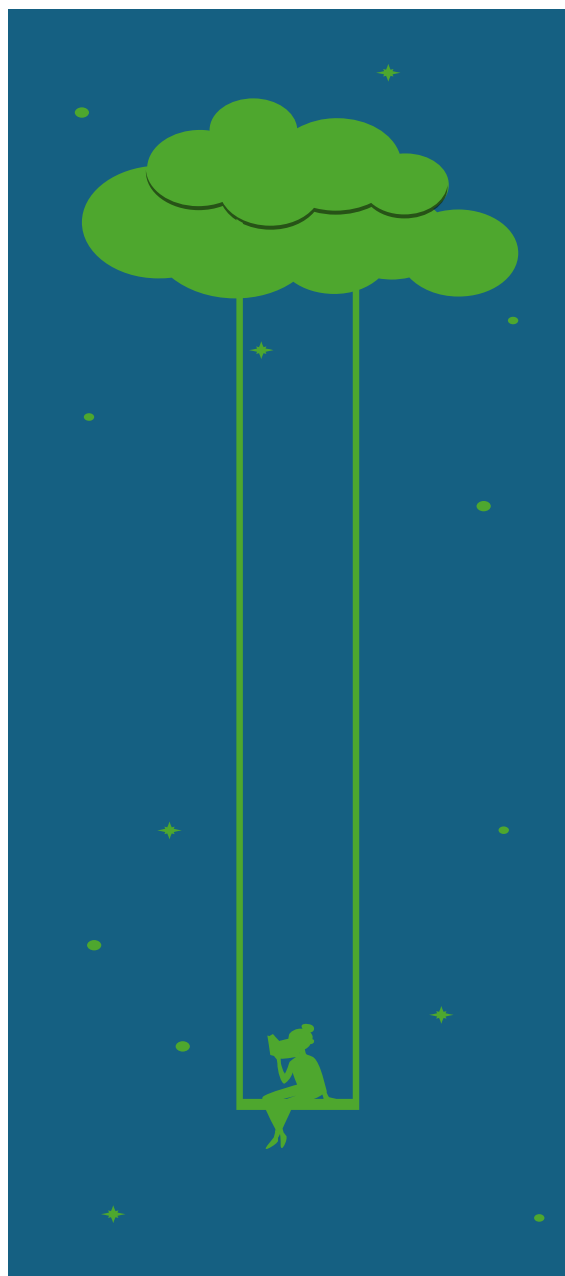
**STRATEGIES TO
RAISE YOUR GRADE**

**PLANNING FOR
SUCCESS**



**REVISION AND
EXAM TECHNIQUE**





Exam					Grade								
Board	Month	Year	Tier	Total	9	8	7	6	5	4	3	2	1
Edexcel	June	2017	H	240	190	157	124	96	68	41	27		
Edexcel	November	2017	H	240	189	150	112	85	58	32	19		
Edexcel	June	2018	H	240	202	170	139	109	79	50	35		
Edexcel	November	2018	H	240	194	159	125	95	66	37	22		
Edexcel	June	2019	H	240	198	167	137	108	80	52	38		
Edexcel	November	2019	H	240	197	165	133	103	73	43	28		
Edexcel	November	2020	H	240	189	157	126	96	66	37	22		
Edexcel	November	2021	H	240	187	154	122	93	65	37	23		
Edexcel	June	2022	H	240	194	165	137	104	71	38	21		
Edexcel	November	2022	H	240	194	165	137	104	71	38	21		
Edexcel	June	2023	H	240	203	174	145	112	79	47	31		
Edexcel	November	2023	H	240	203	174	145	112	79	47	31		
Edexcel	June	2024	H	240	197	167	137	105	73	42	26		
Edexcel	November	2024	H	240	200	170	140	107	75	43	27		
Averages					196	164	133	102	72	42	27		

ACCESSING TOP MARKS IN MATHS

MASTER THE BASICS

- **Consolidate Core Concepts:**

Focus on key topics such as algebra, fractions, percentages, geometry, trigonometry, and probability. Understanding the fundamentals will make it easier to tackle more complex questions.

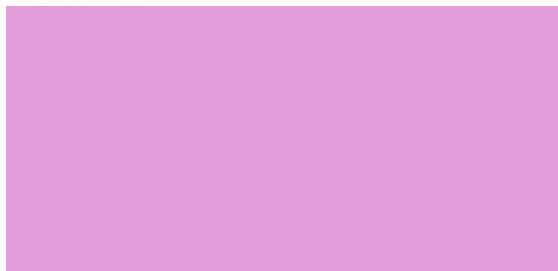
- **Identify Weak Areas:**

Use past papers and your QLAs to identify any gaps in knowledge and work on them.



Questions	Question Title	Score	Clip Number
1	Pythagoras' theorem	2 / 2	U385
2a	Substitution into a formula	2 / 2	U585
2b	Change the subject of the formula	2 / 2	U556
3	Set up and solve equations, write ratios in the form 1:n	2 / 5	U599
4	Percentage Profit	4 / 4	M681
5	Frequency polygons	2 / 2	U840
6	Speed	4 / 4	U151
7	Quadratic equations in context, area of trapezium	0 / 3	U150, U265
8a	Rates from graphs	0 / 2	U638
8b	Rates from graphs	0 / 1	U638
9a	Laws of indices (powers of unit fractions)	3 / 3	U235
9b	Laws of indices (power of power rule)	1 / 1	U235
10	Repeated percentage decrease, reverse percentages	3 / 3	U988
11	Product rule for counting	0 / 2	U369
12	Trigonometry	2 / 3	U283
13	Inverse proportion	0 / 3	U357
14a	Solving quadratic equations by factorising	0 / 2	U963
14b	Expand triple brackets	3 / 3	U606
15	Capture-recapture	3 / 3	U328
16	Upper and lower bounds (calculations)	3 / 3	U587
17a	Draw histograms	2 / 3	U814
17b	Interpret histograms	2 / 2	U983
18	3D trigonometry, ratio	1 / 4	U170, U577
19	Volume problem solving	1 / 4	U617
20	Sequences from recurrence relations	4 / 4	U434
21	Conditional probability	4 / 5	U806
22	Simultaneous equations where one is non-linear	0 / 5	U547
Total		50 / 80	

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Total		37 / 80	



ACCESSING TOP MARKS IN MATHS

PRACTICE PAST PAPERS REGULARLY

- **Familiarise Yourself with the Exam Format:**

Past papers are invaluable for understanding the style and structure of the exam. The exam can have tricky worded questions, so practicing these will improve your confidence and ability to answer them.

- **Time Yourself:** Practicing under timed conditions will help you manage your time effectively during the exam.

- **Review Mark Schemes:** After completing past papers, always check the mark schemes to understand what the examiners are looking for. This helps with fine-tuning your approach and identify areas of weakness.

STRATEGIES TO RAISE YOUR GRADE

PROBLEM SOLVING TECHNIQUES

- **Application of Knowledge:** Maths isn't just about remembering formulas but knowing when and how to apply them. Practice applying different methods to solve a variety of problems.
- **Use of Higher-Level Questions:** To score higher marks, practice solving more challenging problems that test your ability to think critically.

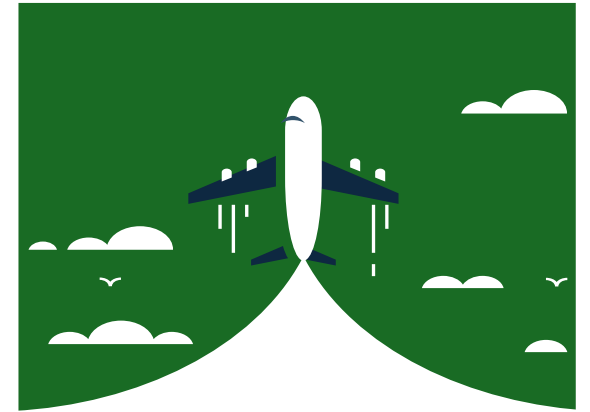
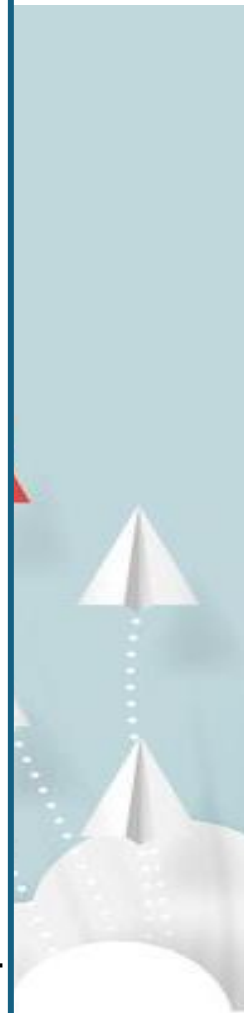
19 $p : q = 4 : 5$

$3q : r = 2 : 7$

Work out $p : q : r$

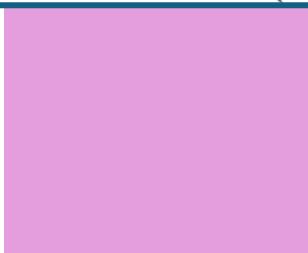
..... : :

(Total for Question 19 is 3 marks)



20 Show that $(10y + 40) \div \frac{5y^2 - 80}{3y^2 - 7y - 20}$ can be written in the form $ay + b$
where a and b are integers.

(Total for Question 20 is 4 marks)



Perimeter, area and volume

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

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

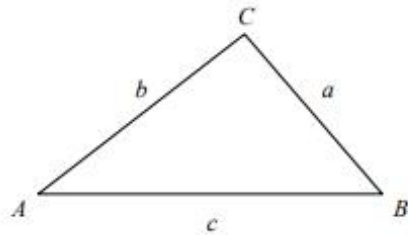
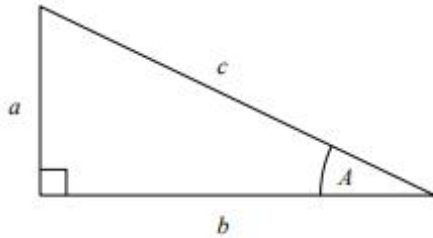
Volume of a prism = area of cross section \times length

Where r is the radius and d is the diameter:

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

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

Pythagoras' Theorem and Trigonometry



Compound Interest

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

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

Quadratic formula

The solution of $ax^2 + bx + c = 0$

where $a \neq 0$

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

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

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

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:

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

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

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

Probability

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

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

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

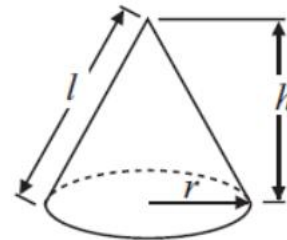
The **pressure formula** (or pressure equation) is therefore

$$\text{pressure} = \frac{\text{force}}{\text{area}} \text{ or } P = \frac{F}{A}$$

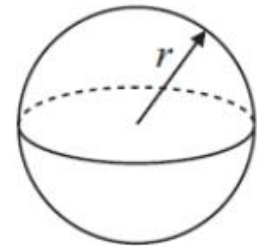


$$\text{Volume of cone} = \frac{1}{3} \pi r^2 h$$

$$\text{Curved surface area of cone} = \pi r l$$



$$\text{Volume of sphere} = \frac{4}{3} \pi r^3$$
$$\text{Surface area of sphere} = 4\pi r^2$$



REVISION AND EXAM TECHNIQUE

USE OF REVISION RESOURCES

- **Textbooks and Online Resources:** Use revision books and websites such as Corbettmaths, 1stClassMaths, or Maths Genie for video tutorials, practice questions, and detailed explanations of complex topics.
- **Interactive Tools:** Sparx Maths offer interactive learning experiences that can help you understand topics at your own pace. You should be completing Independent Learning at the Deepen Level, and completing the XP/Target home learning tasks.

▼ Show building blocks

Rationalising denominators that contain two terms


Introduce

Question 1

[Answer](#)

Question 2

[Answer](#)

Question 3

[Answer](#)

Question 4

[Answer](#)

Question 5

[Answer](#)


Strengthen

Question 1

[Answer](#)

Question 2

[Answer](#)

Question 3

[Answer](#)

Question 4

[Answer](#)

Question 5

[Answer](#)

Question 6

[Answer](#)


Deepen

Question 1

[Answer](#)

Question 2

[Answer](#)

Question 3

[Answer](#)

Question 4

[Answer](#)

Question 5

[Answer](#)

REVISION AND EXAM TECHNIQUE

TACKLING HIGHER GRADE CONTENT

- **Tackle Word Problems and Proofs:** Work on understanding word problems that require multiple steps, and focus on any proofs required (e.g., algebraic or geometric)
- **Focus on More Complex Topics:** For grades 7-9, topics like advanced algebra (quadratics, simultaneous equations), trigonometry (sine/cosine rule), functions, vectors and circle theorems can be key areas for high marks.

PLANNING FOR SUCCESS

UNDERSTANDING THE MARK SCHEMES

- **Practice Answering to the Point:** Examiners mark for accuracy, so ensure you're answering questions clearly and succinctly. Don't just provide an answer—**show your working and explain steps where necessary.**
- **Avoid Missing Simple Marks:** Don't rush through questions—missing out on simple points (like units or correct notation) can cost you marks.

PLANNING FOR SUCCESS

STAY CONSISTENT

- **Daily Practice:** Consistency is crucial. Even spending just 30-60 minutes a day on Maths will add up over time.
- **Review Mistakes:** After every test or practice session, review the mistakes you made and learn from them. Understanding where you went wrong is key to improving.

PLANNING FOR SUCCESS



STAY CALM AND ORGANISED

- **Create a Revision Plan:** Plan your revision schedule and stick to it. Prioritise topics based on your strengths and weaknesses.
- **Stay Relaxed During Exams:** On the day of the exam, stay calm and focus on what you know. If you're stuck on a question, move on and come back to it later.

PLANNING FOR SUCCESS

KNOW WHEN AND HOW TO ASK FOR HELP

- **Ask Your Teacher for Guidance:** If you're struggling with a particular concept, don't hesitate to ask for help.
- **Intervention:** We have multiple intervention sessions, and ones with Mr Szreter that will focus on the higher grade content. Attending these with support from a teacher will help you build confidence and practice key skills.

TOP TIPS

1. Move from revising content to practising exam technique.
2. Don't be tempted to cram before the exam – build confidence with little and often revision of topics.
3. Expose yourself to mark schemes to see how examiners mark your work.
4. Rehearse exam skills by building timed responses into your revision.
5. Attend interventions and ask for help.
6. We know you will be great, you have to believe in yourself too!

