

HOW TO REVISE FOR MATHS

The most effective method of revising for maths is to practice questions!



HOW TO REVISE FOR MATHS



VOLUME

PYRAMIDS
 VOLUME = $\frac{1}{3}Ah$

SPHERE
 VOLUME = $\frac{4}{3}\pi r^3$
 SURFACE AREA = $4\pi r^2$

COMBINING SHAPES
 $\frac{1}{3}\pi \times 4^2 \times 9 = 150.8$
 $\pi \times 4^2 \times 6 = 301.6$
 $= 5 \times 15 \times 10 = 750$

BEARING
 THE BEARING OF B FROM A

REFLECTION
 LINE OF REFLECTION $y=6$

TRANSFORMATION
 90° CLOCKWISE
 CENTRE

SIN, COS AND AREA RULES

GRADE 10 REVISION:

$\sin \alpha = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{y}{r}$
 $\cos \alpha = \frac{\text{adjacent}}{\text{hypotenuse}} = \frac{x}{r}$
 $\tan \alpha = \frac{\text{opposite}}{\text{adjacent}} = \frac{y}{x}$

example:

$PS = 10 \cos(40) = 7.66$
 $QS = 10 \sin(40) = 6.43$
 $PQS = \cos^{-1}\left(\frac{6.43}{10}\right) = 50^\circ$

$SR = \cos^{-1}\left(\frac{6.43}{18}\right) = 69.08^\circ$
 $RS = 18 \sin(69.08^\circ) = 16.81$

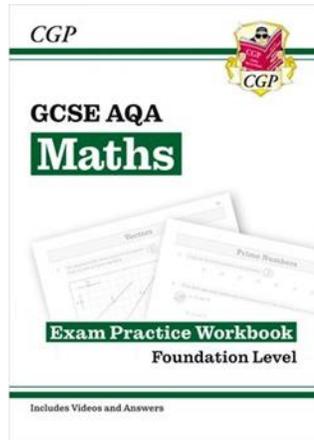
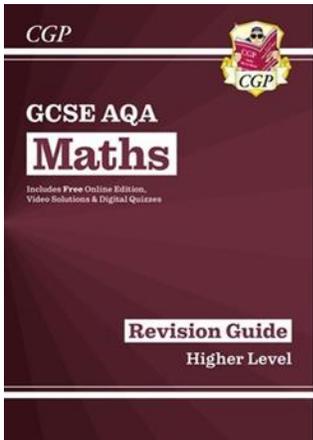
ANGLES OF ELEVATION AND DEPRESSION:

note that angle of elevation & depression are always equal.

REVISION:
 Platinum math: Exercise 1 page 215

SIN, COS & AREA RULES:

angles are labelled with capital letters & the side opposite the angle is labelled with the corresponding lowercase letter.



Maths Revision

The Quadratic formula

$ax^2 + bx + c = 0$

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

EXAMPLE

Solve $3x^2 + 7x - 1 = 0$

$a=3, b=7, c=-1$

$x = \frac{-7 \pm \sqrt{7^2 - 4(3)(-1)}}{2(3)}$

$= \frac{-7 \pm \sqrt{49 + 12}}{6}$

$= \frac{-7 \pm \sqrt{61}}{6}$

$= 0.1350 \quad \text{or} \quad -2.468$

*if the question mentions dp or sf.

GCSE MATHS TUTOR

NUMBER

THE WHOLE OF 9-1 GCSE MATHS NUMBER IN 1 HOUR!!

CGSE Maths Tutor



LITTLE AND OFTEN

IT'S ABOUT
REVISING
LITTLE BUT
OFTEN



AND BEST OF ALL...

Students are currently expected to complete between 30mins – 60 mins worth of homework.

If students could also then complete 15 minutes on a topic each time this would be

Start early and then build up towards the exam period/mocks.



REVISE STRATEGICALLY

Questions	Topic	Score	Sparx Code
1a	Finding the lowest common multiple (LCM)	1 / 1	M227
1b	Calculating with roots and powers	1 / 1	U851
1c	Adding and subtracting integers	1 / 1	U417
1d	Using a written method to divide integers, Understanding and ordering integers	1 / 1	U453, U600
2a	Estimating and measuring	1 / 1	U102
2b	Understanding, measuring and drawing angles	0 / 1	U447
2c	Finding areas using grids	1 / 1	M900
2d	Mixed problems: Finding the area and perimeter of simple shapes	1 / 1	U993
3a	Multiplying and dividing with negative numbers	0 / 1	U548
3b	Multiplying and dividing with negative numbers	1 / 1	U548
3c	Multiplying and dividing with negative numbers	0 / 1	#REF!
3d	Calculating with roots and powers	1 / 1	U851
4	Constructing fractions, Simplifying fractions	2 / 2	U163, U646
5	Finding fractions of amounts, Multiplying integers, Adding & subtracting decimals	4 / 4	U881, U127, U478
6a	Converting between mixed numbers and improper fractions	1 / 1	U692
6b	Converting between fractions, decimals and percentages	1 / 1	U888
7	Drawing and interpreting pictograms	4 / 4	U506
8a	Substituting into algebraic formulae	2 / 2	U585
8b	Substituting into algebraic formulae, Solving equations with two or more steps	3 / 3	U585, U325
9	Converting between fractions, decimals and percentages	3 / 3	U888
10	Using the correct order of operations	3 / 3	U976
11	Converting units of length, mass and capacity	2 / 2	U388
12	Finding the percentage an amount has been changed by	1 / 1	U278
13	Using equivalent ratios to find unknown amounts, Drawing bar charts	3 / 3	U753, U363
14	Choosing suitable averages and solving problems	1 / 3	U717
15	Area of compound shapes, Write numbers as percentages of other numbers	2 / 3	U970, U925
16	Calculating with speed	1 / 3	U151
17	Angles on a line and about a point, Constructing and solving equations	0 / 3	U390, U599
18	Finding prime numbers	3 / 3	U236

An example QLA sheet which students receive after every mock and assessment.



Sparx Maths



Students made

83%

more progress with just 15 minutes of practice every week

Students using Sparx Maths Homework made **83% more progress with just 15 minutes** of practice (in comparison to those who did no homework). For each further 15 minutes of practice they made 67% more progress.

[View the report](#)



1 hour

of Sparx Maths a week significantly improves grades

External research conducted by RAND Europe and Cambridge University found that using Sparx Maths for **1 hour** a week significantly improves grades.

[View the report](#)

[What teachers say](#)



“Actively working on Sparx for the recommended one hour of homework per week for one whole school year was associated with an increase of almost 30% of a GCSE grade.” *Researchers from RAND and the University of Cambridge*



Sparx Maths



Compulsory

Hey Alex,

This is your personalised Compulsory homework. You need to answer every question correctly to complete it.

0/1



XP Boost



Target

▼ Introducing Sparx Maths

Not started

“Actively working on Sparx for the recommended one hour of homework per week for one whole school year was associated with an increase of almost 30% of a GCSE grade.” *Researchers from RAND and the University of Cambridge*



Sparx Maths

Independent Learning

Find topics

My activity

Search for topics:

Enter topic name or code

Your curriculum:

GCSE

Default level:

Level 3

Select a topic:

Number



Algebra



Ratio and Proportion



Geometry



Probability



Statistics



Change levels to challenge yourself.



Search topics by name or codes.

“Actively working on Sparx for the recommended one hour of homework per week for one whole school year was associated with an increase of almost 30% of a GCSE grade.” *Researchers from RAND and the University of Cambridge*



Sparx Maths

Writing probabilities as fractions - U408 Level 3 ✓ ★ ★ ▾ ⓘ

▼ Show building blocks

Chance and probability

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**

Allows you to see what prior knowledge you need to be successful or where this topic can be taken further.

“Actively working on Sparx for the recommended one hour of homework per week for one whole school year was associated with an increase of almost 30% of a GCSE grade.” *Researchers from RAND and the University of Cambridge*



EXAM QUESTIONS



Please write clearly in block capitals.

Centre number Can

Surname _____

Forename(s) _____

Candidate signature _____

I declare this is my own work.

GCSE
MATHEMATICS
Higher Tier Paper 3 Cal

Monday 7 November 2022 Mo

- Materials**
For this paper you must have:
- a calculator
 - mathematical instruments
 - the Formulae Sheet (enclosed).

- Instructions**
- Use black ink or black ball-point pen
 - Fill in the boxes at the top of this paper
 - Answer all questions.
 - You must answer the questions outside the box around each page
 - If you need extra space for your work, write on the back of this book. Write the question number in the space provided.
 - Do all rough work in this book.

- Information**
- The marks for questions are shown in brackets.
 - The maximum mark for this paper is 80.
 - You may ask for more paper. These must be tagged.

- Advice**
- In all calculations, show your working.



3 0 1 7 8 5 0 1 7 0 1

8300/1F

8300/1F

8300/1F



Please write clearly in block capitals.

Centre number Can

Surname _____

Forename(s) _____

Candidate signature _____

Candidate number

GCSE
MATHEMATICS
Foundation Tier Paper 1 Non-Calculator

Thursday 25 May 2017 Morning

Time allowed: 1 hour 30 minutes



Materials

- For this paper you must have:
- mathematical instruments.

You must not use a calculator.

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer all questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

- Information**
- The marks for questions are shown in brackets.
 - The maximum mark for this paper is 80.
 - You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer book.

- Advice**
- In all calculations, show clearly how you work out your answer.

For Examiner's Use	
Pages	Mark
2-3	
4-5	
6-7	
8-9	
10-11	
12-13	
14-15	
16-17	
18-19	
20-21	
22-23	
TOTAL	



Centre Number Can

Surname _____

Forename(s) _____

Signature _____

Centre Number Can

Surname _____

Forename(s) _____

Signature _____

Candidate Number

GCSE
MATHEMATICS
Higher Tier Paper 1 Non-Calculator

Friday 20 May 2022 Mo

Student Self Reflection

Topics I need to revise

Topics I need to learn

Silly Mistakes?

Target mark for next time

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GCSE
MATHEMATICS
Foundation Tier Paper 2 Calculator Allowed

Thursday 3 November 2022 Morning

Time allowed: 1 hour 30 minutes



Student Self Reflection

Topics/Question I need to revise

Topics/Questions I need to learn

For teacher use	
Pages	Mark
2-3	
4-5	
6-7	
8-9	
10-11	
12-13	
14-15	
16-17	
18-19	
20-21	
TOTAL	

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GCSE Revision - A BIT OF EVERYTHING

AQA
Higher

This is a collection of

Guidance

1. Check you
2. Always show your workings
3. Take your

Guidance

1. Check your answers seem right.
2. Always show your workings
3. Take your time when working through this collection of questions

Revision for this test
www.corbettmaths.com/contents



ONLINE REVISION RESOURCES



AQA GCSE Prediction

Mathematics

Paper 1

Foundation Tier

Nov 2023

8300/1F

Information

- This is a predicted paper, based on statistics on previous exams.
- There are no guarantees on the 'closeness' of this paper.
- This site, and all that work on it, have no affiliation or relationship with any exam board.
- This site is not endorsed by any company or charity, unless we state otherwise.

Advice

- Click 'Mark' to mark your answer, once a question is marked, it cannot be edited.
- The questions must be done in order, from Q1 onwards.
- Each question will change subtly every time you take this test.
- Your mark for the paper will only save if you are logged in AND you fully complete the paper.

Start Paper

Maths Genie

AQA Past papers

Question Paper	Mark Scheme
June 2022 Foundation Paper 1	Mark Scheme
June 2022 Foundation Paper 2	Mark Scheme
June 2022 Foundation Paper 3	Mark Scheme
June 2022 Higher Paper 1	Mark Scheme
June 2022 Higher Paper 2	Mark Scheme
June 2022 Higher Paper 3	Mark Scheme

Grade 4

Videos	Exam Questions	Exam Questions Booklet	Solutions
Compound Interest and Depreciation	Exam Questions	Compound Interest and Depreciation	Solutions
Indices	Exam Questions	Indices	Solutions
Prime Factors, HCF and LCM	Exam Questions	HCF, LCM	Solutions
Real Life and Distance Time Graphs		Real Life Graphs	Solutions
Inequalities	Exam Questions	Inequalities	Solutions



ONLINE REVISION RESOURCES



5-a-day

Videos

Worksheets

GCSE Revision



Corbettmaths Revision Cards

GCSE Higher or
GCSE Foundation

Practice Papers

1st January		Foundation 5-a-day	
	Work out the volume of the cube. State the units of your answer.		
	What type of correlation is shown?		
Work out $\frac{3}{4} - \frac{1}{3}$	Work out $\frac{3}{4} + \frac{4}{7}$		
Jam is made from sugar and strawberries in the ratio 3:5. A jar contains 150g of sugar.	How many grams of strawberries are in the jar? How many grams of jam are in the jar?		
	Calculate the area of the trapezium		

Name:

Exam Style Questions

Collecting Like Terms



Equipment needed: Calculator, pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

Video 9



Answers and Video Solutions

