
Maths GCSE Making the Grade

Moving into Year 11



Key Information

Edexcel examination board

2 x 1 hour 45 minute papers (calculator and non-calculator)

Foundation paper (C – G grades)

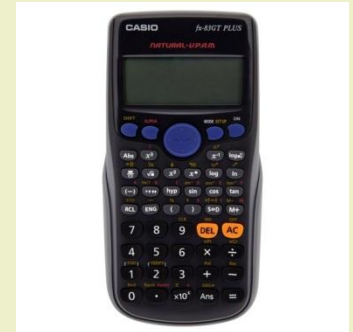
Higher paper (A* - D grades)

Topic areas: Number, Algebra, Geometry, Handling data and Probability

Problem solving is a key focus for exam questions

Pupils will be set exam question based homework

Pupils will be expected to have their own calculator and geometry set for every lesson



Useful websites

Student moodle – past papers

Doddle learn

Hegarty Maths

BCC bitesize

Corbett Maths



Exercise books

Surface area and volume 10/05/15

$$\begin{array}{r} x + 2y = 12 \\ 3x - 10y = 0 \end{array} \rightarrow \times 3 \quad \begin{array}{r} 3x + 6y = 36 \\ 3x - 10y = 0 \end{array} -$$

$$36 - 16 = 2.25$$

$$y = 2.25$$

$$x + 2 \times 2.25 = 12 \quad x = 7.5$$

10x5 = 50
8x5 = 40
8x10 = 80
SURFACE AREA = 170

4x4 = 16
4x5 = 20
4x5 = 20
4x5 = 20
SURFACE AREA = 80

3x4 = 12
3x7 = 21
4x7 = 28
SURFACE AREA = 61

Cross section
8x15 = 120

8x10 = 80
8x5 = 40
10x5 = 50
SURFACE AREA = 170

UNFINISHED
8x10 = 80
8x5 = 40
10x5 = 50
SURFACE AREA = 170

Surface area = cm²
Volume = cm³

Percentages 02/06/15

1 dp. 2 sf.

4.513 → 4.5 ✓ 56.3 → 56 ✓
25.472 → 25.5 ✓ 2310 → 2300 ✓
0.0344 → 0.034 ✓

47% of 3450
0.47 × 3450 = 1621.50 ✓

£4500 earning 4% a year; how much after 2 years?

100% → +4% → 104%
4500 × 1.04 → 4680 = 1st year ✓
4680 × 1.04 → 4867.20 = 2nd year ✓

depreciates by 35% a year.
2007 = 5460 2008 = ? ✓
100% → -35% → 65%
5460 × 0.65 = 3549 ✓

£2000 for 3 years = 5% annum interest

100% → +5% → 105%
2000 × 1.05 → 2100 ✓
2100 → +5% → 2205 ✓
2205 → +5% → 2315.25 ✓

154500 for 2 years 4%

100% → +4% → 104%
154500 × 1.04 = 160680 ✓
160680 × 1.04 = £167107.20 ✓

£2000 depreciate 25% : end of 3

100% → -25% → 75%
12000 × 0.75
× 0.75
× 0.75 = £5062.50 ✓

sale: £220 20% off: original price £275

100% → -20% → 80%
? × 0.8 = £220 ✓
220 ÷ 0.8 = 275 ✓

80% = 32
20% = 8
32 + 8 = 40
40 questions ✓

sale: £102 15% off: original price £120

100% → -15% → 85%
? × 0.85 = 102
102 ÷ 0.85 = 120 ✓

area = $\frac{1}{2} ab \sin C$

$= 0.5 \times 28.3 \times 11.7 \times \sin 67^\circ$
 $= 152.394181 \text{ cm}^2$ ✓

$a^2 = b^2 + c^2 - 2bc \cos A$
 $a^2 = 10^2 + 7^2 - 2 \times 10 \times 7 \times \cos 73^\circ$
 $a^2 = 100 + 49 - 40$
 $a^2 = 109$
 $a = \sqrt{109} = 10.4 \text{ cm}$ ✓

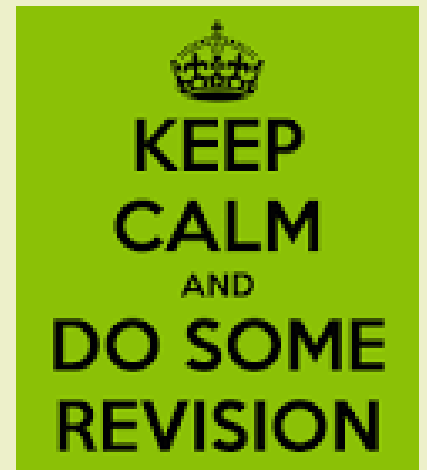
area = $\frac{1}{2} ab \sin C$

$= 0.5 \times 14 \times 8 \times \sin 105^\circ$
 $= 54.1 \text{ cm}^2$ ✓

$\sqrt{a^2 = b^2 + c^2 - 2bc \cos A}$
 $\sqrt{7.6^2 = 5.3^2 + 4.2^2 - 2 \times 5.3 \times 4.2 \times \cos A}$
 $57.8 = 28.1 + 17.6 - 44.5 \times \cos A$
 $57.8 - 28.1 - 17.6 = -44.5 \times \cos A$
 $\cos^{-1}(\frac{30.1}{-44.5}) = \cos^{-1}(-0.27)$
 106.7° ✓

Revision tips

- Focus only on specific topics that you need to work on
- Make a revision book with examples and past questions
- Learn the formulas
- Past paper questions
- Make posters and stick them around your room
- Learn and understand the key words



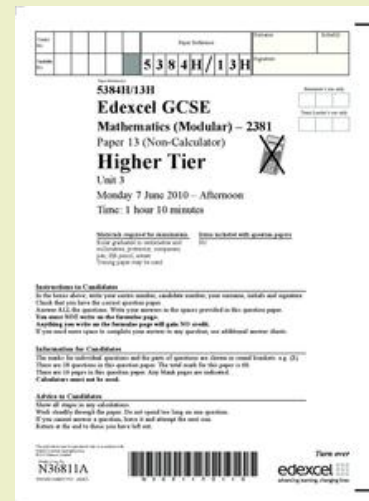
Top 5 tips for the exam

- Check to see how many marks there are for each question and double check your answers
- Use a highlighter to help decipher what you need to do
- Show all your working out, even on the calculator paper
- Set out your answers clearly and structure them so that the examiner can see exactly what you are doing
- Use a pencil and ruler for all diagrams, graphs, charts etc...



Past exam papers

- These are one of your best revision tools!
- Each year, questions are very similar but involve different scenarios and numbers
- Use the past papers being completed in your lessons and for assessments as revision material
- Student moodle



Preparation starts now!

- Be on time and prepared for lessons
- Utilise your teacher if you need extra help
- Start making a revision book with past paper questions and key things to remember for each topic
- Learn the formulas you need to remember
- Make sure you understand all of the key words e.g. factorising, solve, cumulative, interquartile range etc...
- Learn your timetables and basic number skills
- Put the work in now to relieve pressure nearer to the exams

