Mathematics GCSE – what it entails

- Pearson Edexcel: 3 papers, each 90 minutes long
- 1 non-calculator paper; 2 calculator papers
- Questions are 1 – 7 marks; emphasis on workings

- Foundation Grade 1 – 5
- Higher Grade 3 – 9
- GCSE is given for 'mathematics' and does not reference the tier

- Decision on tier of entry is finalized in February of Year 11; but students need to know where they are at before then!

Foundation	Grade	Higher
	9	
	8	
	7	
	6	
	5	
Pass	4	Pass
	3	
	2	
	1	
	U	

Mathematics GCSE – what colleges and employers are looking for

Mathematics is nationally the most popular A level choice~ (and most respected by universities). Generally, colleges will ask for a minimum Grade 7 at GCSE.

Many employers will look for a Grade 5 as a 'Good' pass

4 is a pass ('C'). Students who fail to meet this are required to retake at college (until turning 18)

Foundation	Grade	Higher
	9	85%
	8	73%
	7	**60%**
	6	47%
77%	**5**	**33%**
62%	**4**	**22%**
46%	3	16%
30%	2	
15%	1	
	U	

Being prepared for maths

- Students are encouraged to look after their own books
- Students need a MODERN scientific calculator
- Students who have and use their own calculator do better in exams

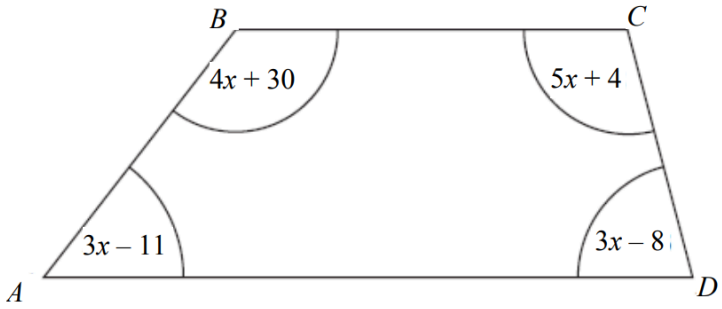
What does it mean to do maths?

Department for Education

Ensure that all pupils …
Become fluent in the fundamentals of mathematics
Reason mathematically by following a line of inquiry
Can solve problems … persevering in seeking solutions

Typical 4-mark crossover question

ABCD is a quadrilateral.



All angles are measured in degrees.

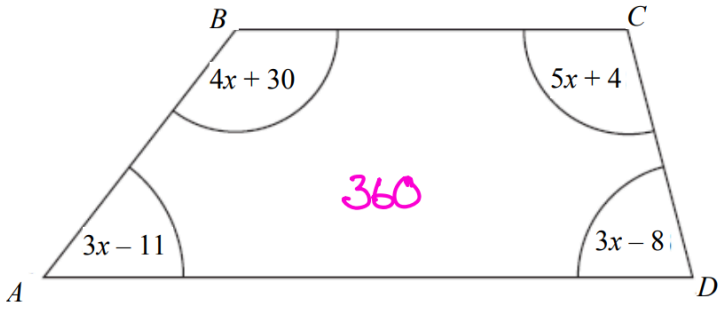
Show that *ABCD* is a trapezium.

(Total for Question 7 is 4 marks)

What does acceptable work look like?

- Clearly laid out method
- Steps can be followed by the examiner & conclusion is clear
- Maths teachers model methods in class
- Students need to practice their working (before they get into the exam!)

ABCD is a quadrilateral.



All angles are measured in degrees.

Show that *ABCD* is a trapezium.

$4x + 5x + 3x + 3x + 30 + 4 - 8 - 11 = 360$

$15x + 15 = 360$

$15x = 345$

$x = \frac{345}{15}$

$= 23$

$A = 3 \times 23 - 11 = 58$

$B = 4 \times 23 + 30 = 122$

$C = 5 \times 23 + 4 = 119$

$D = 3 \times 23 - 8 = 61$

$A + B = 58 + 122$

$= 180$

$C + D = 119 + 61$

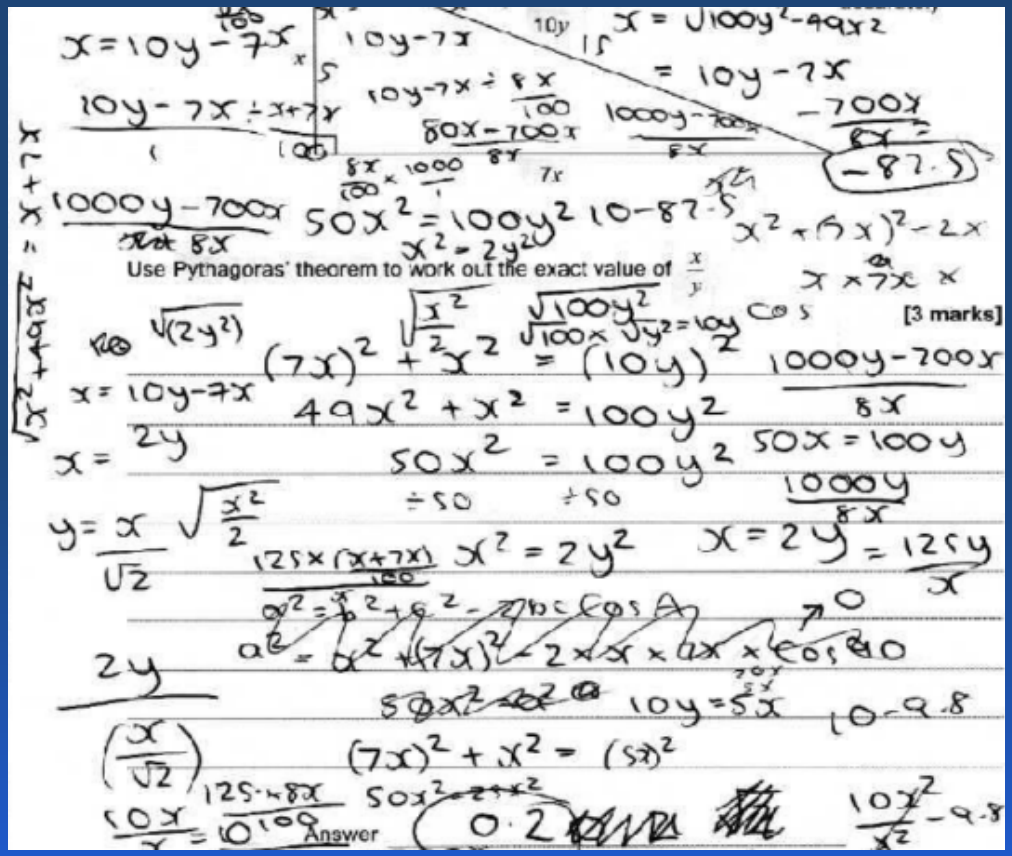
$= 180$

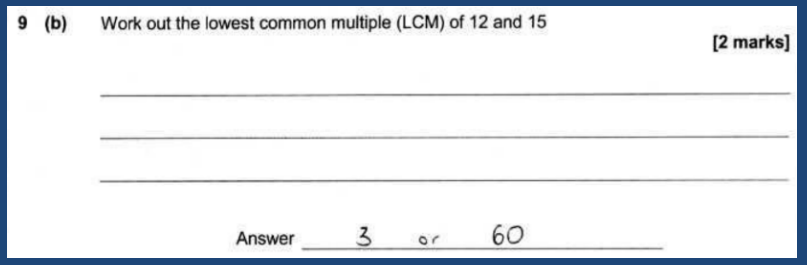
ABCD is a trapezium as there are two pairs of contenor angles.

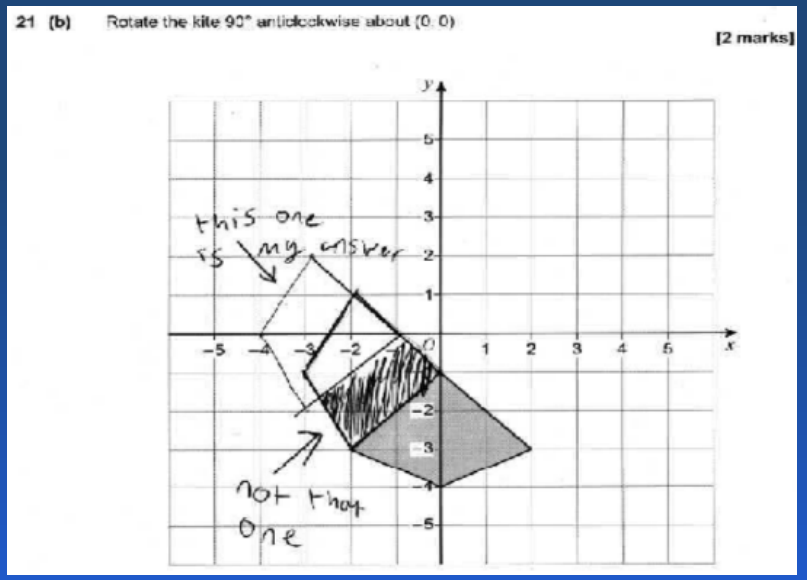
(Total for Question 7 is 4 marks)

What does unacceptable work look like?

- These have been provided by the Exam board as examples of '0' scores
- Workings need to be laid out clearly
- Questions need to be answered fully
- Students MUST use a pencil for diagrams







How to revise maths?

Skills practice

- Sparx
Homework
Independent learning
Sparx Maths

- Corbettmaths
How to videos
Practice questions/ans
Videos and Worksheets – Corbettmaths

- MathsMadeEasy
Revision by topic/grade
Sample questions
Edexcel GCSE Maths Revision | Past Papers | Tests | Worksheets (mmerevise.co.uk)

Past paper questions

- Provided by school
Materials on Sharepoint / Edulink
Maths - Home (sharepoint.com)

- Maths genie
Has past papers with sample answers written in a student friendly way
https://www.mathsgenie.co.uk/papers.php

How can you help at home?

- Look through your childs' exercise books with them
- ✓ What have they been studying?
- ✓ Are they correcting their own work & modelling answers?
- ✓ Are loose sheets stuck in? (some students struggle to complete this in class where teaching time is a premium)
- If possible, provide a quiet space for revision
- ✓ GCSE maths is based on an ability to independently solve problems
- If possible, print out revision lists and past papers
- ✓ It's helpful to practice writing answers (most students who use a laptop for other subjects will still do their GCSE maths on paper)
- Make sure they come to school with the right equipment
- Students who have and practice using their own equipment will do better in their exams

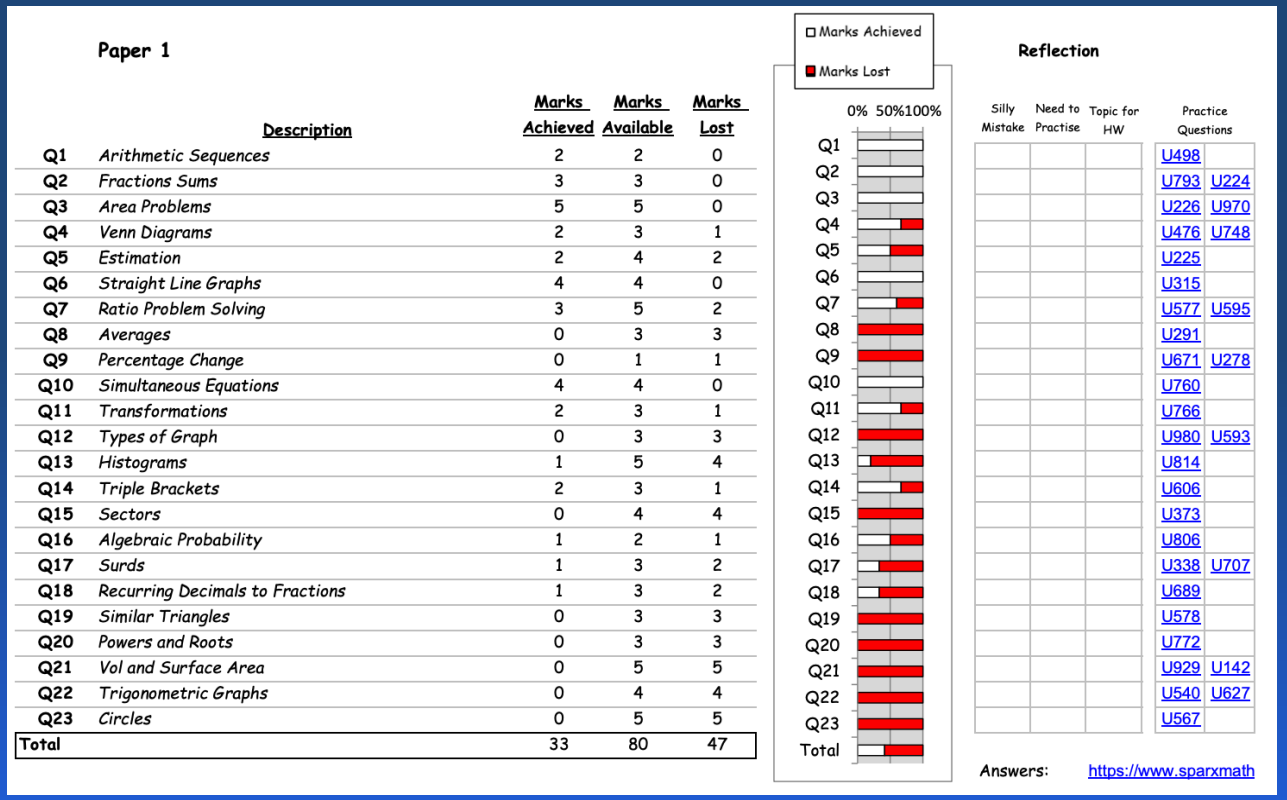
How does the school help?

- Year 10 mocks are an early chance to practice in exam conditions
- The school will provide a revision list and sample papers
- Students take their completed papers home & get a current 'grade'
- With a detailed breakdown of where they are gaining / losing marks
- Which provides for a focussed discussion at parents evening

GCSEs start in just over 15 months

In year 11:

- **After school revision sessions are held every week**
- Students are encouraged to purchase revision guides
- **Lesson time is given over to revision and exam practice when the curriculum is complete**



Paper 1

	Description	Marks Achieved	Marks Available	Marks Lost
Q1	*Arithmetic Sequences*	2	2	0
Q2	*Fractions Sums*	3	3	0
Q3	*Area Problems*	5	5	0
Q4	*Venn Diagrams*	2	3	1
Q5	*Estimation*	2	4	2
Q6	*Straight Line Graphs*	4	4	0
Q7	*Ratio Problem Solving*	3	5	2
Q8	*Averages*	0	3	3
Q9	*Percentage Change*	0	1	1
Q10	*Simultaneous Equations*	4	4	0
Q11	*Transformations*	2	3	1
Q12	*Types of Graph*	0	3	3
Q13	*Histograms*	1	5	4
Q14	*Triple Brackets*	2	3	1
Q15	*Sectors*	0	4	4
Q16	*Algebraic Probability*	1	2	1
Q17	*Surds*	1	3	2
Q18	*Recurring Decimals to Fractions*	1	3	2
Q19	*Similar Triangles*	0	3	3
Q20	*Powers and Roots*	0	3	3
Q21	*Vol and Surface Area*	0	5	5
Q22	*Trigonometric Graphs*	0	4	4
Q23	*Circles*	0	5	5
Total		33	80	47

Reflection

Silly Mistake	Need to Practise	Topic for HW	Practice Questions	
			U498	
			U793	U224
			U226	U970
			U476	U748
			U225	
			U315	
			U577	U595
			U291	
			U671	U278
			U760	
			U766	
			U980	U593
			U814	
			U606	
			U373	
			U806	
			U338	U707
			U689	
			U578	
			U772	
			U929	U142
			U540	U627
			U567	

Answers: https://www.sparxmath

Thank you..

Please ask questions!

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