



# ***Year 11 Parent Forum - Maths***

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# The only way to get good at Maths is to do Maths!

- Set aside the time for revision and stick to it.
- Know what topics could come up.
- Flash cards with key concepts or reading revision guides may help but applying these concepts is key.
- Get into the habit of doing a little bit on a regular basis – 15 minutes every day or half an hour to an hour 3 times a week. If this is done throughout the year, the revision is more effective rather than doing last-minute cramming.
- Know how to use calculators and other equipment.
- Ask for help – from a friend, from the internet, from a teacher.
- **Practice doing maths** – in the CGP books, using Hegartymaths, mathsbot.com



# Support available

- Revision session every Thursday after school – Higher in A106, Foundation in A210
- Weekly intervention sessions – lunch, Core PE, in-lesson, guidance
- Holiday revision sessions – invite only.
- CGP books.
- Online resources such as mymaths or Hegartymaths



# Revision support

**Maths – all books are £2.85**

- Foundation/Higher revision guide
  - Foundation/Higher workbook
  - Foundation/Higher exam practice questions
  - Targeting Grade 8 & 9 workbook
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- These are all available on Scopay. Orders are with students about a week after they have been received.



# Exam Dates 2020

- Paper 1: non-calculator 19<sup>th</sup> May 2020
- Paper 2: calculator 4<sup>th</sup> June 2020
- Paper 3: calculator 8<sup>th</sup> June 2020
- All exams are in the morning.
- All exams are 1 hour 30 minutes.
- Mock exams will happen again in March.



# Exam Top Tips (from AQA)

- **1. Avoid common errors**

The first eight questions on an exam paper are the easier questions designed to settle students into the paper. Focus on getting the basics right and taking time over the first eight questions in order to minimise simple mistakes.

On a Foundation paper, a Grade 3 student will commonly make a few errors in the first eight questions which, over three papers, will add up to quite a few easy marks lost. The first eight questions are generally fluency-type questions based upon the nine basics of maths: addition, subtraction, multiplication, division, fractions, decimals, percentages, scale and ratio.

- **2. Presentation of work**

Make answers readable and tidy. It may sound silly but numbers should look like numbers. Sometimes students go too fast with the easier questions and it gets scruffy – or sometimes the writing is too small. For example, the examiner may question whether a number is a 4 or a 6; or a 1 or a 7.

It is common to find transcribing errors, where students' copy numbers across from the question or the calculator incorrectly or even inaccurately copy their own numbers. If a mistake is made, simply cross it out.



# Exam Top Tips (from AQA)

- **3. Check, check and check again**

Take time to follow the instructions on the exam paper and to check their answers. Perhaps estimate the answer first – what is the answer roughly going to be?

- **4. Tools for the job**

Students need to spend time getting used to the tools they need for their exams. Some can have trouble using their protractor and compass. But constructions of angles, triangles and bisecting angles are easy marks.

- **5. Calculator use**

In the exams there are two papers which include the use of a calculator – this is three hours of exam time.

It has been noted by Chief Examiners, that students spend time working out calculations manually but they could, and should, be using a calculator. Things such as standard form and fractions work can all be done on the calculator, making students more efficient in their use of exam time. Students need to understand the calculator buttons and how to properly use them.



# Exam Top Tips (from AQA)

- **6. Think units**

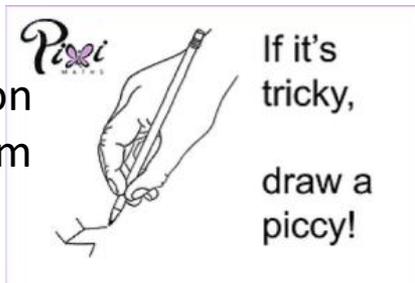
Students need to remember to add units to their answers and also think carefully about them too. Sometimes the answer will already show the units required. Sometimes there will be a mix of units within the question. It is usual to work in the same units, so conversions will be required e.g. from centimetres to metres. Make sure they know the conversions – how many mms in a cm; cms in a metre; metres in a km?

- **7. Command Words**

Knowing what ‘solve’ actually means, the difference between ‘draw’ and ‘sketch’ and what ‘show that’ means are important to success.

- **8. Wordy Questions**

For example, if the question is about two adults and three children going on holiday, and flights cost £550, and the villa costs £625 and the taxi ride from the airport costs £80, but they have saved up £1500, you could turn this into quite a nice little sketch with a beach and sunglasses and an airplane etc. It may help students find a way into the question.



# Exam Top Tips (from AQA)

- **9. Which questions do you do first?**

Students do not need to do the whole paper in order from Q1 all the way through to the end. It may be that they focus on the questions they can do immediately then go back and have a go at the ones which they weren't sure on before having a go at those they found the most difficult.

It may be that starting at the back and doing the more difficult questions when their brain is most fresh works better for them.

Do what works for you!

- **10. Show your working; justify your answer; prove that...**

Understanding some key terms will help your students answer the questions. For example, 'decide' means a response such as yes it is, or no, it isn't. There has to be a clear choice of one thing or another; usually with justification as to why the choice was made.

'Show your working' – this statement means that students will not get full marks if they don't show their working, even if the answer is correct. 'Justify your answer' is asking for statement of fact. 'Prove' means to show beyond any doubt mathematically.



# Exam Top Tips (from AQA)

- **11. Multi-mark and Multi-part Questions**

Chief Examiners tell us that the high mark questions later are not answered so well by some students. They are not even attempting them if they look daunting. A strategy that does work is to look at the questions – maybe a 4 or 5 mark question and ask: what would I need to do to get 1 mark; 2 marks; 3 marks?

In multi-part questions, part a) may be about a topic but then part b) may only be lightly associated in terms of the topic. For example, part a) may be a bearings question but part b) may be about angles around a point and part c) may be about angles in parallel lines.

- **12. Know how the papers are marked**

One examiner does not mark an entire paper. One examiner gets assigned a number of questions to mark for everybody. Each question on an exam paper is scanned in and sent off to different examiners.

Students must not write or draw anything outside of the answer space. It is likely to be missed by the examiner and they will drop marks. If they need extra space to write, they should draw an arrow indicating where the extra writing is. If the examiner cannot read it, or is not clear where the answer is, they will not get the marks.



# Exam Top Tips (from AQA)

- **13. Estimate the answer**

Mistakes are made when an answer is clearly wrong but the numbers are correct. For example, a bike travelling at 9 mph after four hours would have travelled roughly 40 miles. When students see the question, it is a good idea to estimate the sort of answer they are expecting. They can estimate it through rounding the numbers. In the example, 9 is nearly 10 and 10 times 4 is 40 so 40 miles is a good estimate.

- **14 Time keeping**

The number of marks in a question is the indication of the number of minutes to be spent on it. 1 mark questions require little more than 1 minute; 2 marks, 2 mins and so on. If a question is taking up valuable minutes it's okay for them to move on and come back to it.

- **And finally...**

Knowing more about exam techniques will stand students in good stead, as long as they can also do the maths: **'practice, practice, practice until you cannot get the maths wrong!'**



# Command Words

- Assess - Make an informed judgement.
- Comment - Present an informed opinion.
- Complete - Finish a task by adding to given information.
- Describe - Set out characteristics.
- Draw - Produce a diagram.
- Estimate - Assign an approximate value.
- Factorise - Take out the common factor or factorise into two brackets if a quadratic.
- Give - Produce an answer from recall.
- Measure - Use a mathematical instrument, such as a ruler or protractor, to establish the size of a length or angle.
- Plot - Mark on a graph.
- Prove - Demonstrate validity on the basis of evidence.
- Rotate - Turn around a fixed point.
- Shade - Darken an area of a diagram.
- Show - Provide structured evidence to reach a conclusion
- Simplify - Collect terms together or cancel down.
- Simplify fully - Collect terms together and factorise the answer, or cancel terms completely.
- Solve - Arrive at answer using a numerical or algebraic method.
- Translate - Move laterally without rotating or flipping.
- Work out - Perform one or a set of steps or calculations to arrive at an answer.



# Mock exam information

Year 11 Assessment 1 - Paper 1H					
Question	Yr	Mark =	Skills	Mark =	Max Marks
	Level	Result	Mark =	Result	
1	Multiplication with words [multiple choice]	1			119
2	Inequal word problems [multiple choice]	1			574
3	Order of operations, simplifying expressions [multiple choice]	1			24, 157, 458
4	Estimating calculations [multiple choice]	1			151
5	Solving linear inequalities	1	2		253
6	Express one number as a fraction of another	1	3		62
7	Using gradient to find points	1	3		284
8	Calculating relative frequency	1	1		356, 357
9	Estimate frequency and testing for bias	1	1		957
10	Range from a set of data, odd and even fractional	1	3		418, 66
11	Linear graphs	1	2		946
12	Perimeter problem solving with algebra	1	4		552
13	Comparing numbers in standard form	1	2		124
14	Converting volume units [multiple choice]	1	1		782
15	Sequences from pictures, comparing with ratio	1	2		156, 328, 329
16	Ratio problem solving	1	3		328, 329
17	Theoretical Probability - Expectation	1	3		355
18	Percentage increase, compare quantities using ratio [multiple choice]	1	1		88, 328
19	Star rate [multiple choice]	1	1		524
20	Surface area of a composite shape	2	5		544, 546, 586
21	Contingency frequency diagram calculations - interquartile range	2	2		438
22	Contingency frequency diagram calculations	1	1		438
23	Interpreting bar plots	1	2		436
24	Sequences with algebra, simultaneous equations	1	4		157, 151
25	Enlarge a shape by a scale factor	1	2		646
26	Sketching area in Venn diagrams [multiple choice]	1	1		374, 375
27	Probability problem solving	1	3		78, 62
28	Order of operations, laws of indices	1	3		185, 187, 428
29	Laws of indices (fractional powers)	1	2		185
30	Circle graphs	1	1		384
31	Circle graphs, graph transformations	1	1		384, 311
32	Change subject of a formula, fractions, ratio	1	3		288, 68, 328, 328
33	Solving quadratic equations by factorising	1	1		238
34	Solving quadratic equations by completing the square	1	3		238, 239
35	Dividing with words, simplifying words	1	3		115, 415
36	Graph transformations - translation	1	3		388
37	Graph transformations - reflection in the x-axis	1	1		311
38	Using exact values of sine, cosine and tangent	1	3		385
<b>TOTAL</b>					
<b>24 88</b>					

Total mark	21
Percentage	26%

Year 11 Assessment 1 - Paper 2H					
Question	Yr	Mark =	Skills	Mark =	Max Marks
	Level	Result	Mark =	Result	
1	Circle of similar [multiple choice]	1			532
2	Standard form [multiple choice]	1			424
3	Compare quantities using ratios, simplify ratios [multiple choice]	1	1		328, 329
4	One number as a percentage of another [multiple choice]	1	1		62, 76
5	Types of sequences	2	4		197, 447, 449, 450
6	Practical shape	1	2		37
7	Experimental probability	1	2		356
7b	Experimental probability - reasoning	1	1		356
8	Compare quantities using ratios, simplify ratios	1	3		328, 329
9	Error intervals	1	2		774
10	Error intervals	1	1		774
11	Value of a sphere, rate of change	1	3		288
12	Independent events and probability trees	1	1		361
13	Calculate probability from a probability tree	1	1		361
14	Calculate probability from a probability tree	1	2		361
15	Gradient of a line segment	1	1		281, 284
16	Gradient of a line segment	1	1		281, 284
17	Simplify algebraic fractions involving quadratics	1	3		223
18	Law	1	2		675, 679
19	Comparing averages and range	1	1		415, 415
20	Oracles	2	2		728
21	Value of a cylinder	2	2		573
22	Distance-time graphs	1	1		
23	Instantaneous rate of change	1	1		
24	Rate of speed from a distance-time graph	1	2		
25	Exponential problems	1	1		793
26	Area in a triangle, trigonometry	1	4		485, 518
27	Substitution into complex formulas	1	3		278, 279
28	Circle rate, calculating line	1	3		527, 724
29	Speed [calculating line]	1	1		724
30	Equality of similar lines [multiple choice]	1	1		778
31	Value and surface area of similar shapes	1	3		628
32	Volume, converting volume units, boards	2	4		568, 746, 458
33	Venn diagrams for probability	1	4		383
34	Simultaneous equations involving quadratics	1	4		246
35	Convert recurring decimals to fractions	1	3		54
36	Function tables	1	3		283
37	Linear functions, simple problems with functions	1	3		235, 237
<b>TOTAL</b>					
<b>35 88</b>					

Total mark	35
Percentage	44%

<b>OVERALL MARKS</b>	<b>96</b>
<b>OVERALL PERCENTAGE</b>	<b>46%</b>
<b>OVERALL GRADE</b>	<b>5</b>

Year 11 Assessment 1 - Paper 3H					
Question	Yr	Mark =	Skills	Mark =	Max Marks
	Level	Result	Mark =	Result	
1	Convert fractions to decimals [multiple choice]	1			74
2	Integer solutions to inequalities [multiple choice]	1			267
3	Compare decimal numbers, converting decimals [multiple choice]	1			45, 53
4	Estimate angle in polygons [multiple choice]	1			554
5	HCF, LCM	1	4		31, 32, 34, 35
6	Similar polygons	1	3		688, 689
7	Compound interest, bank loans	2	4		34, 774
8	Straight line graphs [parallel lines]	1	3		218, 214
9	Straight line graphs [break if a point is on a line]	1	2		
10	Reverse percentages	1	3		36
11	Prime numbers, linear sequences [all term]	1	3		28, 138
12	Combining areas	1	2		625
13	Combining areas, multiplying by scalars	1	2		625, 626
14	Perimeter	1	2		734
15	Properties of quadrilaterals	1	1		826
16	Drawing exponential graphs	1	3		382
17	Writing algebraic expressions [multiple choice]	1	1		153
18	Solving equations and straight lines [multiple choice]	1	1		247
19	Multiples, odd and even numbers, problem solving	1	3		25, 33
20	Expressions with algebraic fractions	1	3		172, 244
21	Straight line graphs [find a intercept] [multiple choice]	1	1		
22	Polynomials through with algebra	1	3		438, 284
23	Algebraic division properties	1	3		364, 345
24	Algebraic division properties	1	2		364, 345
25	Circle theorems	1	1		538, 686
26	Reverse percentages	1	2		262
27	Estimating area under a curve	1	3		
28	Estimating area under a curve - reasoning	1	1		
29	3D trigonometry - finding a side	1	2		868
30	3D trigonometry - finding an angle	1	4		868
31	Interpreting Histograms	1	4		443
32	Histograms - calculating frequency	1	2		443
33	Calculating conditional probability	1	3		364
34	Circles, area and length	1	5		328
<b>TOTAL</b>					
<b>48 88</b>					

Total mark	40
Percentage	50%

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Year 11 Assessment 1 - Paper 1H		Your Score	Marks Available	Silly Mistake	Need to Revise	Hegarty Maths
	Question					
1	Multiplication with surds (multiple choice)	1	1			113
2	Negative vectors (multiple choice)	0	1			624
3	Order of operations, simplifying expressions (multiple choice)	1	1			24, 157, 158
4	Estimating calculations (multiple choice)	0	1			131
5	Solving linear inequalities	1	2			269
6	Express one number as a fraction of another	0	3			62
7	Using gradient to find points	3	3			204
8a	Calculating relative frequency	1	1			356, 357
8b	Relative frequency and testing for bias	0	1			357
9	Range from a set of data, add and subtract fractions	1	3			410, 66
10	Inverse proportion	1	2			346
11	Perimeter problem solving with algebra	0	4			552
12	Comparing numbers in standard form	2	2			124
13	Converting volume units (multiple choice)	1	1			702
14a	Sequences from pictures, comparing with ratio	0	2			196, 328, 329
14b	Ratio problem solving	0	3			328, 329
15	Theoretical Probability - Expectation	0	3			355
16	Percentage increase, compare quantities using ratio (multiple choice)	1	1			88, 328

Be Inspired & Achieve Together



# Hegarty Maths

- [www.hegartymaths.com](http://www.hegartymaths.com)
- Students will login with the school name, their own name, D.O.B. and will choose their own password.
- We can reset their password for them but cannot tell them what their password was or set it for them.
- Can be used to revisit topics and have a go at questions with immediate feedback.
- All homework is set on Hegarty but students can also access it to have a go at other questions at any time – work does not have to be set by the teacher.



# Hegarty Maths – Have a go!

- Logon to the computers:

Username: Parent1

Password : Sunshine100

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

- Go to the student login at the top of the pages.

first name: StudentX

last name: StudentX

DOB 01/01/2016

where X is an integer between 1 and 5 incl.

