How you can support students with their Maths learning at home

The Current Picture

Currently Y11, as a cohort, are **further behind** their peers from previous cohorts at the same point in time.

This might be due to the impact of lockdown and missed learning earlier in school. We are supporting as much as we can in school with quality first teaching, additional revision sessions and intervention.

The key message is, however, to achieve the same attainment and progress as previous years, they have a lot more to do. A lot of Year 11 are **not doing enough...** *yet*.

This is a broad generalisation (apologies for this), but the data tells us this is the situation.

Revision strategies

Maths is too big to just 'revise maths'

It's easier to pick a few topics to focus on per week (use the RAG sheets) and then follow this structure:

- Revise - flashcards, memorising facts etc.
- Practice - complete questions on Sparx, exam questions using notes to help
- Review - check understanding by covering notes and removing the scaffolding

Teachers will usually set exam papers for homework, do these every few weeks alongside the topic-focused revision above to ensure exam practice

Revise in shorter bursts 20-30 minutes at a time

Quality beats quantity

DO LOTS OF MATHS QUESTIONS

Quizzes and Improvement Tasks

Higher Autumn Progress Quiz 1 (non-calculator)
[Indices; Standard Form; Angles, Scale Diagrams & Bearings]

Name: Score: / 25 %

U851	1	Between which two integers does the cube root of 80 lie? Circle your answer. 3 and 4 4 and 5 5 and 6 3.5 and 4.5	[1 mark]
U107 U525	2	A plane flies on a bearing of 056° It turns clockwise to fly due South. Circle the angle through which the plane must turn. 124° 146° 236° 3(	
U330 U534	3	Circle the number that is in standard form. 6.4×5^{-7} 0.9×10^{-7} 1×10^{-7}	
U235	4a	Write $\frac{11^{13} \times 11^{3}}{11^{7}}$ as a single power of 11	
	4b	Write $(4^3)^5$ as a single power of 2	

H Aut 1 PQ1	Name:	Date:		
Sparx	**Topic**	**R**	**A**	**G**
U851	1. Calculating with roots and powers – square and cube roots			
U107, U525	2. Calculating bearings, Measuring and drawing bearings – compass directions with bearings			
U330, U534	3. Using standard form with positive indices, Using standard form with negative indices – identify a number in standard form			
U235	4. Index rules with positive indices – write as single powers			
U851	5. Calculating with roots and powers – calculation using roots and powers			
U290	6. Adding and subtracting numbers in standard form – adding/subtracting large numbers with standard form			
U390, U628	7. Angles on a line and about a point, Angles in triangles – multiple step angle problem			
U851	8. Calculating with roots and powers – reasoning with squares			
U826	9. Angles on parallel lines – multiple step angle problem with reasoning			
U107	10. Calculating bearings			
U655, U826	11. Combining angle facts, Angles on parallel lines – multiple step angle proof			
U851	TIF Calculating with roots and powers – problem solving with positive indices			

1. Calculating with roots and powers – cube numbers
Between which two integers does the cube root of 30 lie?

1 and 2 2.5 and 3.5 2 and 3 3 and 4

2. Calculating bearings, Measuring and drawing bearings – compass directions with bearings
I am facing east and turn clockwise to face northwest. Through what angle have I turned?

270° 225° 360° 185°

3. Using standard form with positive indices, Using standard form with negative indices – identify a number in standard form
Circle the number that is in standard form.

7.5×1^{-7} 0.7×10^{-7} 1×10^{-7} 10×10^{-7}

Progress quizzes are followed up by improvement tasks to highlight areas of strength and development and help close knowledge gaps

Cumulative Assessments

-

Year 10 Cumulative Assessment 1

Surname _____

Forename _____

Teacher _____

GCSE
MATHEMATICS

H

Higher Tier Non-Calculator

Time allowed: 50 minutes

Materials

For this paper you must have:
- mathematical instruments

You must **not** use a calculator.

What does my child need to work on?

Year 10 CA1 Review

Complete the table below. Based on your marks for this assessment you will have 1-2 tasks to complete on Sparx Independent learning.

Topic	Question	Max	My Mark	RAG	Sparx
Indices - multiplying	1	1			U235
simplify expression - multiplying terms	2	1			U235
Algebra - applying index laws to negatives	3	1			U235
Standard form - compare numbers	4	1			U330
Laws of indices	5	2			U235
Angles - on a straight line	6	2			U390
Inequalities - integer values	7a	1			U509
Inequalities on number lines	7b	2			U509
Write large number in standard form	8a	1			U330
Standard from to small number	8b	1			U534
Alegbra - collecting like terms	9	2			U105
Algebra - expand single bracket	10a	1			U179
Algebra - factorise single term	10b	1			U365
Division problem with remainders	11a	3			U453
Multiplication with money	11b	3			U293
Listing factors of a number	12a	2			U211
LCM of 2 numbers	12b	2			U751
vertically opposite angles	13a	1			U730
angles in parallel lines - co-interior angles	13b	2			U826
Number reasoning with decimals	14	4			U435, U478
Solve equations with brackets (unknown one side)	15	3			U325
Product of prime factors	16a	3			U739
HCF of 2 numbers	16b	2			U529, U250
Angle facts with reasoning	17	3			U390, U628
LCM worded problem	18	3			U751, U250
Comparing values of algebraic expressions	19	2			
	Total	50			

Feedback (RAG) sheets are on pink paper

Revision List on Google Classroom

This is a working document and should be updated as a minimum after each big assessment

Higher Skills Revision List

Use this as a working document to assess your understanding of the topics. RAG your confidence and understanding of the topics before you start. Choose a variety of topics to revise and then update the RAG sheet regularly so you can keep track of the subjects you want to prioritise. Remember - don't work for too long in one session, use a variety of revision strategies to keep your revision interesting. Get plenty of sleep! A tired brain will struggle to retain anything!

Number

Sparx Website

	Topics	Topic code	RAG
N1	Fractions	U224, U538, U793	
N2	Factors, multiples and primes	U739, U250	
N3	Percentage change	U671, U332, U988	
N4	Standard form	U330, U534, U264, U290	
N5	Calculating with roots and fractional indices	U851, U985, U772, U299	
N6	Converting recurring decimals to fractions	U689	
N7	Surds	U338, U663, U872, U499	

What does my child need to work on?

In summary:

If you want to find something that your child struggles with...

LOOK FOR A GREEN OR PINK SHEET IN THEIR BOOKS

Where can I find resources?

Sparx

- ✓ Independent learning
- ✓ Videos
- ✓ Personalised topics (RAG)

Dr Frost Maths

- ✓ Free online platform
- ✓ All exam board questions
- ✓ Skills quizzes
- ✓ Lots of GCSE content

Corbett Maths

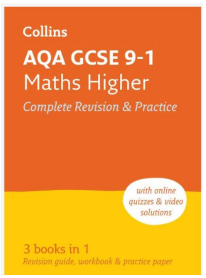
- ✓ Videos
- ✓ Exam Questions
- ✓ Textbook exercises
- ✓ Answers
- ✓ Recall tasks

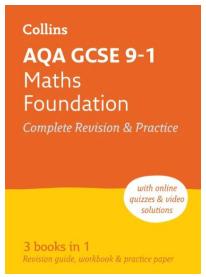
Maths Genie

- ✓ Videos
- ✓ Exam Questions
- ✓ Answers
- ✓ Exam papers
- ✓ Handwritten solutions

BBC Bitesize Maths

- ✓ Full explanations





Removing distractions

- They don't need their phone!
- They don't need their console!
- They don't need music!
- They don't need the TV on!

How can I help my child?

Be positive about maths

If you both don't know, learn together!

Be comfortable **asking the teacher for help**

At GCSE, maths is assessed using different assessment objectives (AOs)

- ✓ Reasoning, describing and explaining
- ✓ Using mathematics in real-life situations

Any questions?