Maths Exam Preparation

Dan Kilduff

Assistant Faculty Leader for Maths, KS4 Lead

dkilduff@brookvalegroby.com

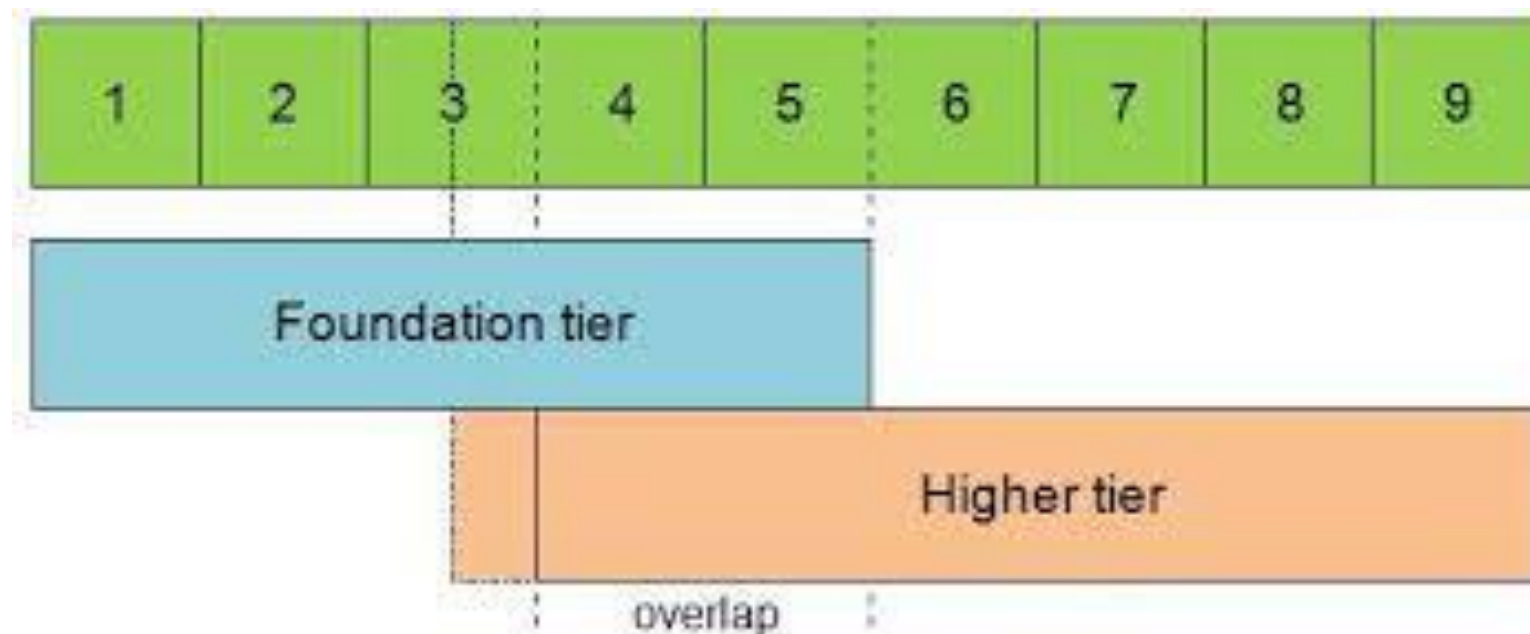# Tiering

How do A*–G grades compare to 9–1 grades?

A*–G grades	9–1 grades	
A*	9	
A	8	
	7	Anchor point
B	6	
	5	
C	4	Anchor point
D	3	
E		
	2	
F		
G	1	
		Anchor point
U	U	

There are three anchor points where standards are benchmarked between the two systems.

Key Dates

Mock Dates:

Paper 1 – Week beginning 13/2/22

Paper 2 and 3 – Week beginning 13/3/22

Exam Dates:

Paper 1 (Non-Calc) – 19th May

Paper 2 (Calc) – 7th June

Paper 3 (Calc) – 14th June

What do the next few months in Maths look like?

1. Past Papers
2. Using QLA

Questions	Question Title	Score			Clip Number
1a	Multiplication with decimals	3	/	3	48
1b	Division of decimals	2	/	3	50
2	Displaying sets in Venn diagrams	3	/	3	372
3	Add or subtract fractions	2	/	3	66
4	Percentage increase or decrease (non-calc)	4	/	4	88
5	Share in a given ratio	3	/	3	334
6	Volume of a prism	1	/	3	571
7	Surface area of spheres and cuboids	4	/	4	588,584
8	Solving quadratic equations (by factorising)	0	/	3	233
9a	Index form (power of 0 and 1)	1	/	1	103
9b	Multiplying numbers in index form	0	/	1	105
9c	Index form (power of negative integers)	0	/	1	104
9d	Index form (powers of unit fractions)	1	/	1	108
10a	Area of a square, estimate complex calculations	3	/	3	554,131
10b	Estimate complex calculations	1	/	1	131
11	Forming equations, change the subject of the formula	2	/	4	176,285
13	Convert recurring decimals to fractions	0	/	1	53
14	Compound shapes, writing algebraic expressions	1	/	3	555,153
15	Expressions with algebraic fractions	3	/	3	172,244
16	Independent events	0	/	4	360,361
17	Linear inequalities as graph regions	2	/	3	275
18	Area of a trapezium, right-angled trigonometry, ratio	0	/	5	559,510,332
19	Rationalising surds	0	/	4	119
20	Equation of a circle, solving simultaneous equations	0	/	3	778,259
21a	Composite functions	0	/	2	293
21b	Complex problems with functions	0	/	4	297
22	Find the turning point of quadratic graphs	0	/	4	256
	Total	36	/	80	

Student scored 1 out of 3 on Volume of a Prism and should attempt task 571 on Hegarty Maths

Whole Class QLA

Q	1a	1b	2	3	4	5	6	7	8	9a	9b	9c	9d	10a	10b	11	13	14	15	16	17	18	19	20	21a	21b	22
%	74%	57%	95%	94%	87%	94%	67%	47%	45%	71%	55%	19%	55%	80%	68%	37%	6%	75%	27%	55%	39%	17%	4%	18%	0%	0%	1%
Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	19	20	21	22	23	24	25	26	27	28	29
Marks	3	3	3	3	4	3	3	4	3	1	1	1	1	3	1	4	1	3	3	4	3	5	4	3	2	4	4
Topic	Multiplication with decimals	Division of decimals	Displaying sets in Venn diagrams	Add or subtract fractions	Percentage increase or decrease (non-calc)	Share in a given ratio	Volume of a prism	Surface area of spheres and cuboids	Solving quadratic equations (by factorising)	Index form (power of 0 and 1)	Multiplying numbers in index form	Index form (power of negative integers)	Index form (powers of unit fractions)	Area of a square, estimate complex calculations	Estimate complex calculations	Forming equations, change the subject of the formula	Convert recurring decimals to fractions	Compound shapes, writing algebraic expressions	Expressions with algebraic fractions	Independent events	Linear inequalities as graph regions	Area of a trapezium, right-angled trigonometry, ratio	Rationalising surds	Equation of a circle, solving simultaneous equations	Composite functions	Complex problems with functions	Find the turning point of quadratic graphs
	3	2	3	3	3	3	3	4	0	1	1	1	1	1	0	2	0	2	3	4	0	0	4	0	0	0	0
	2	3	3	3	4	3	3	1	0	1	1	0	1	2	0	2	0	3	3	4	2	2	0	0	0	0	0
	3	3	3	3	4	3	3	4	3	1	1	1	1	3	1	2	1	3	3	4	3	5	0	2	0	0	0

What do the next few months in Maths look like?

1. Past Papers
2. Using QLA
3. Hegarty
4. Gradual Release of Responsibility

Gradual Release of Responsibility

"Letting Go is Messy" Dr. Julie Webb and Dr. Sunday Cummins
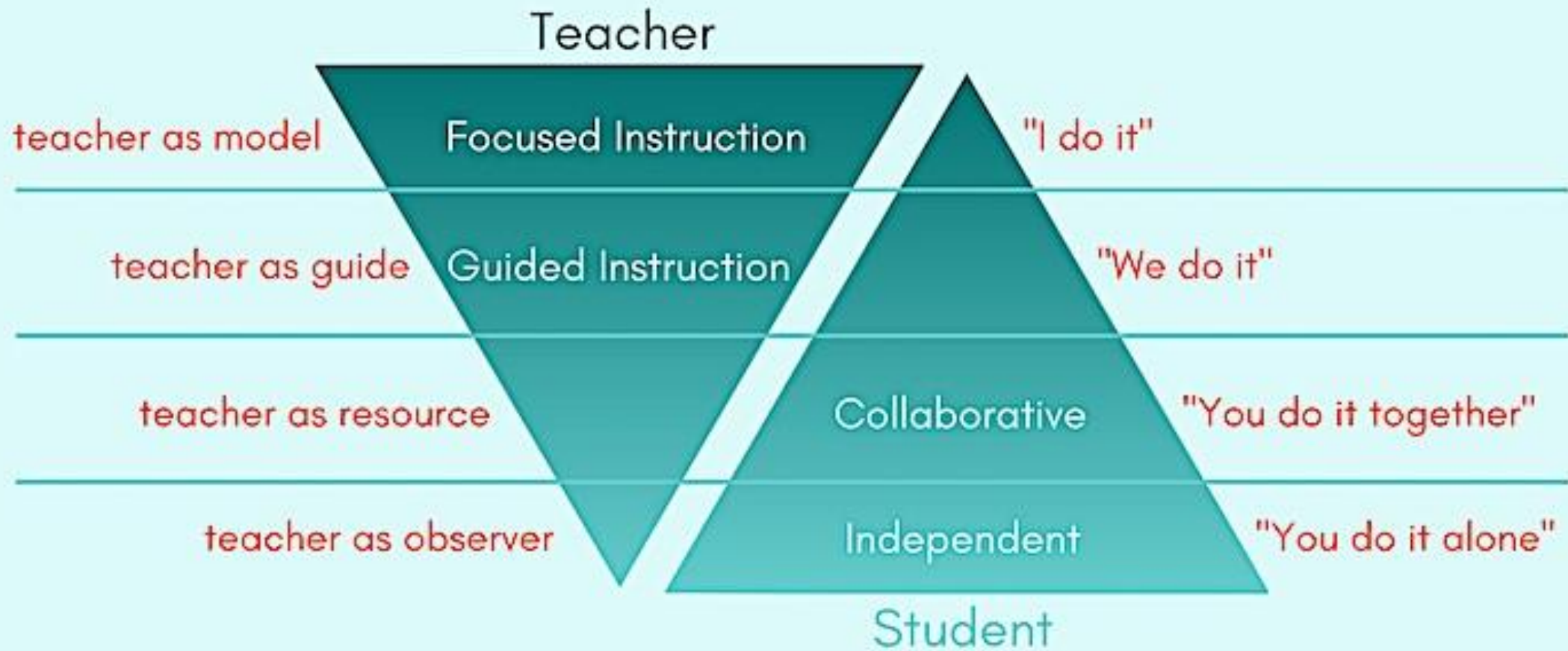
Example of Gradual Release

I DO	WE DO
Expand $7(x + 4)$ $7 \times x + 7 \times 4$ $= 7x + 28$	Expand $10(x + 9)$

What do the next few months in Maths look like?

1. Past Papers
2. Using QLA
3. Hegarty
4. Gradual Release of Responsibility
5. Mark Schemes
6. Mocks
7. Breakfast AM Revision

Websites

- <u>Hegarty Maths</u> – all students have used this over the last year for their homework. All QLA's link to this as well.

- <u>Maths Genie</u> – exam style questions on almost all GCSE topics, ranked by Grade, with written solutions available.

MathsGenie

Grade 5

Videos	Exam Questions	Exam Questions Booklet	Solutions
Writing a Ratio as a Fraction or Linear Function	Exam Questions	Ratio Fraction Problems	Solutions
	Exam Questions	Ratio Problems 2	Solutions
Direct and Inverse Proportion	Exam Questions	Direct and Inverse Proportion	Solutions
Reverse Percentages	Exam Questions	Reverse Percentages	Solutions
Standard Form	Exam Questions	Standard Form	Solutions
Speed and Density	Exam Questions	Compound Measures	Solutions
Changing the Subject of a Formula	Exam Questions	Changing the Subject of a Formula	Solutions
Expanding and Factorising Quadratics	Exam Questions	Expanding and Factorising Quadratics	Solutions
Solving Quadratics	Exam Questions	Solving Quadratics	Solutions
Drawing Quadratic Graphs		Quadratic Graphs	Solutions
Drawing Other Graphs: Cubic/Reciprocal		Cubic/Reciprocal Graphs	Solutions

Websites

- <u>Hegarty Maths</u> – all students have used this over the last year for their homework. All QLA's link to this as well.

- <u>Maths Genie</u> – exam style questions on almost all GCSE topics, ranked by Grade, with written solutions available.

- <u>OnMaths</u> – online practice papers that will self mark for students to get instant feedback.

OnMaths

Websites

- <u>Hegarty Maths</u> – all students have used this over the last year for their homework. All QLA's link to this as well.

- <u>Maths Genie</u> – exam style questions on almost all GCSE topics, ranked by Grade, with written solutions available.

- <u>OnMaths</u> – online practice papers that will self mark for students to get instant feedback.

- <u>ExamQ</u> – students can do question based on a whole range of filtered options.

- <u>Year 11 Google Classroom</u> – lots of resources shared for exam prep.

Tips

1) Time Management
2) Read the question carefully and consider exam vocabulary:
3) Show working and learn how to check answers. For example, substituting your answers back into equations to see if they work can help you find out if you have made any errors.
4) Do Maths!
5) Make use of Diagrams.
6) Rounding and Units
7) Equipment

Questions?

If you need any further information please drop me an email:

dkilduff@brookvalegroby.com