



Because maths matters!

Welcome to the MEI conference 2026

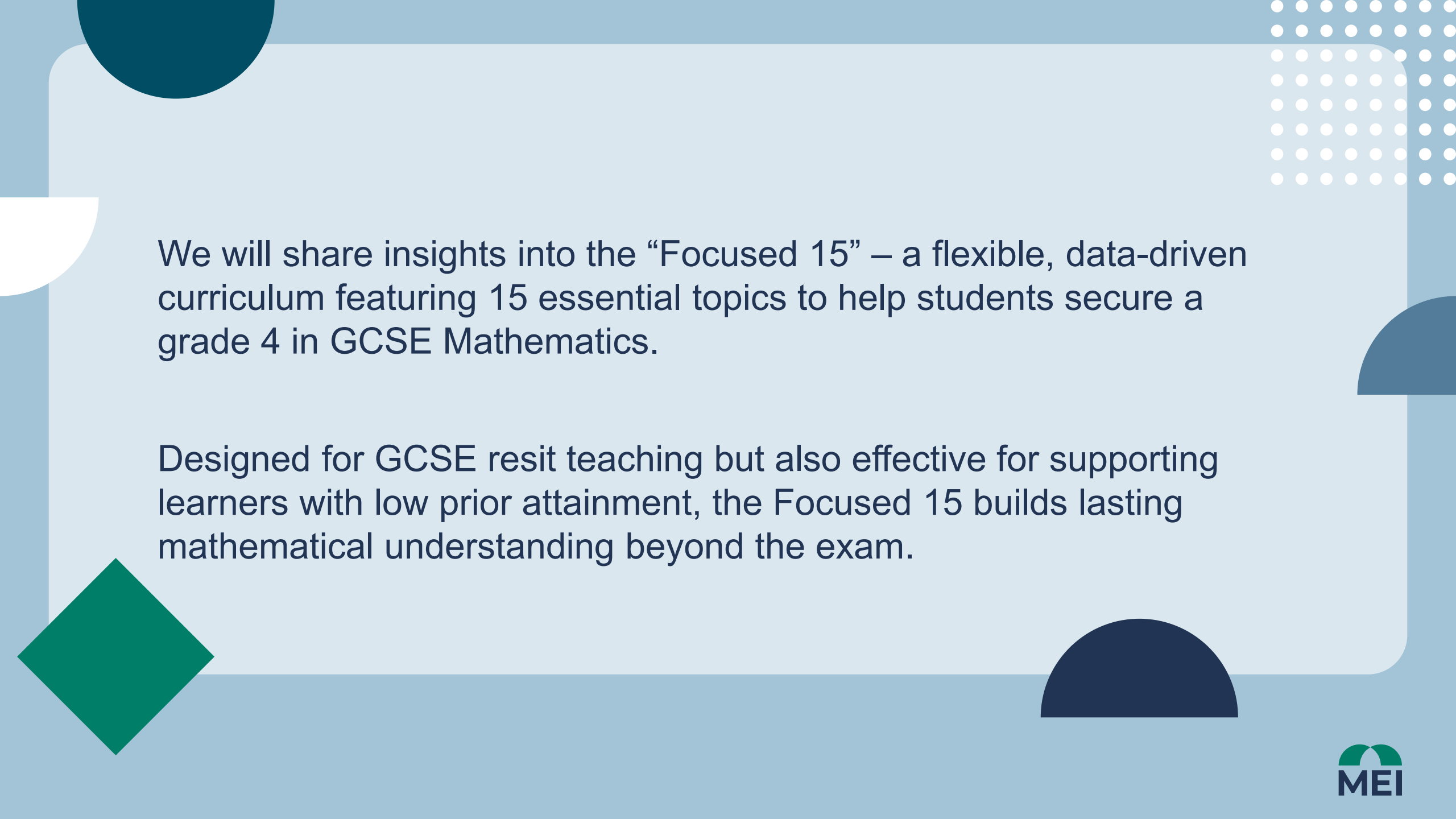
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CASIO[®]



Creating coherence from KS4 to GCSE resit maths for students with low prior attainment

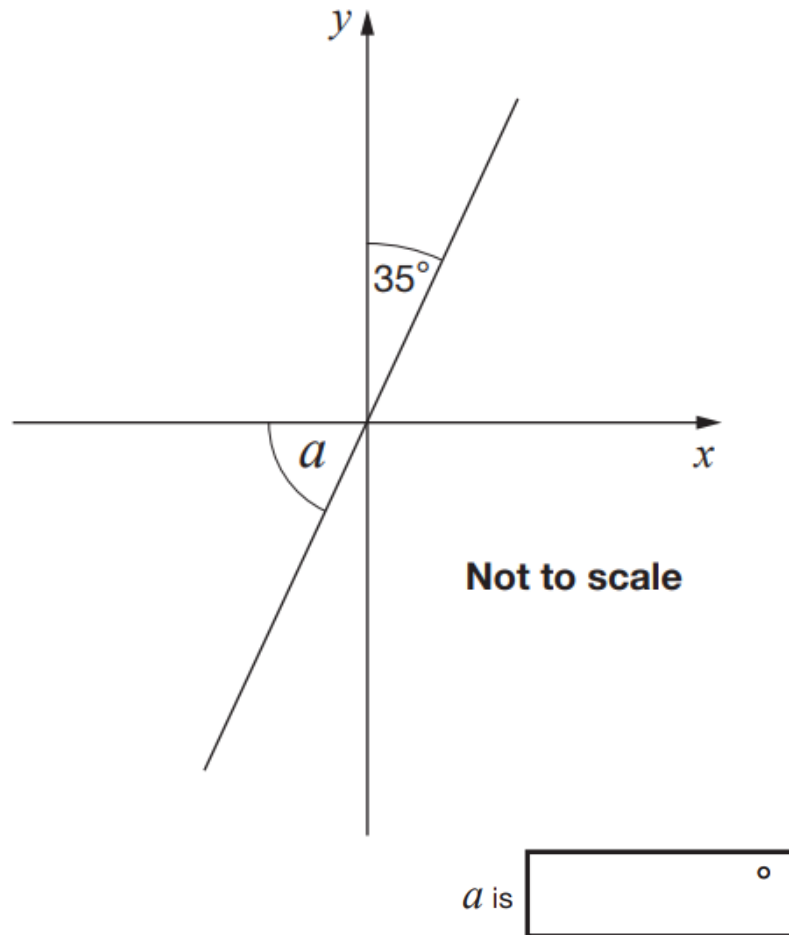
Emma Bell and Rebecca Atherfold



We will share insights into the “Focused 15” – a flexible, data-driven curriculum featuring 15 essential topics to help students secure a grade 4 in GCSE Mathematics.

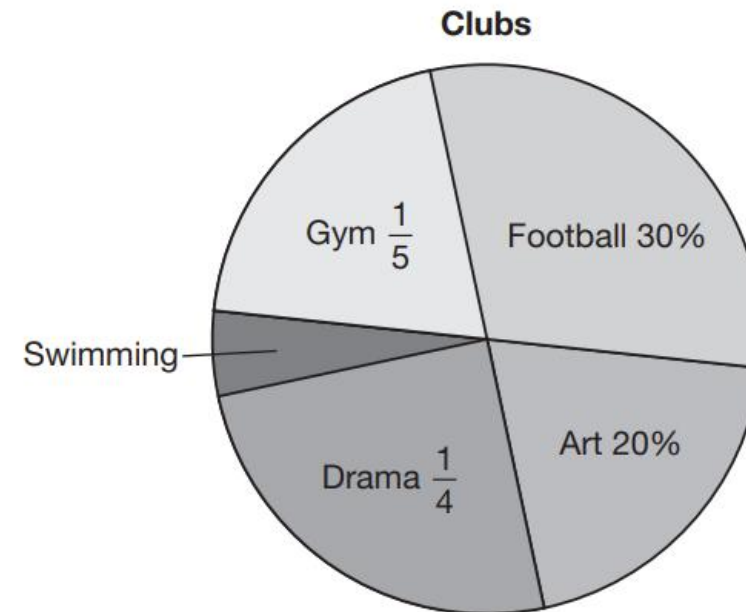
Designed for GCSE resit teaching but also effective for supporting learners with low prior attainment, the Focused 15 builds lasting mathematical understanding beyond the exam.

A line makes an angle with the x -axis as shown.



William asked some children to choose their favourite club.

The pie chart shows the results.



Three children chose swimming.

How many children did William ask altogether?

Which questions are GCSE?

a

$$(5^2 + 3) - 12 \div 4 =$$

b

Write down the value of 3^2

c

$$3 \times 8.9 =$$

d

$$\frac{5}{8} \div 3 =$$

e

$\frac{1}{2}$ of 40

f

Work out the value of 1.5^2

g

19% of 2,300 =

h

$$\frac{5}{12} \div \frac{5}{9}$$

i

Work out $\frac{1}{4}$ of 80

Which questions are GCSE?

KS1

e

$\frac{1}{2}$ of 40

KS2

a

$$(5^2 + 3) - 12 \div 4 =$$

d

$$\frac{5}{8} \div 3 =$$

g

$$19\% \text{ of } 2,300 =$$

c

$$3 \times 8.9 =$$

GCSE

b

Write down the value of 3^2

f

Work out the value of 1.5^2

i

Work out $\frac{1}{4}$ of 80

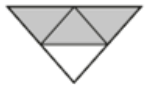
h

$$\frac{5}{12} \div \frac{5}{9}$$

Which questions are GCSE?

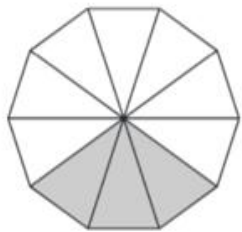
a

What fraction of each shape is shaded?



c

What fraction of this shape is shaded?



b

Here is a diagram made from regular hexagons. What percentage of the diagram is shaded?



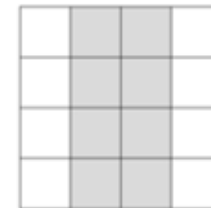
d

This shape is made from equilateral triangles. What fraction of the whole shape is shaded?



e

Here is a centimetre grid. What percentage of the grid is shaded?

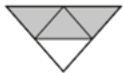


Which questions are GCSE?

KS1

a

What fraction of each shape is shaded?



KS2

b

Here is a diagram made from regular hexagons. What percentage of the diagram is shaded?



d

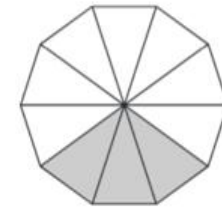
This shape is made from equilateral triangles. What fraction of the whole shape is shaded?



GCSE

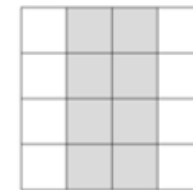
c

What fraction of this shape is shaded?



e

Here is a centimetre grid. What percentage of the grid is shaded?



Which exam?

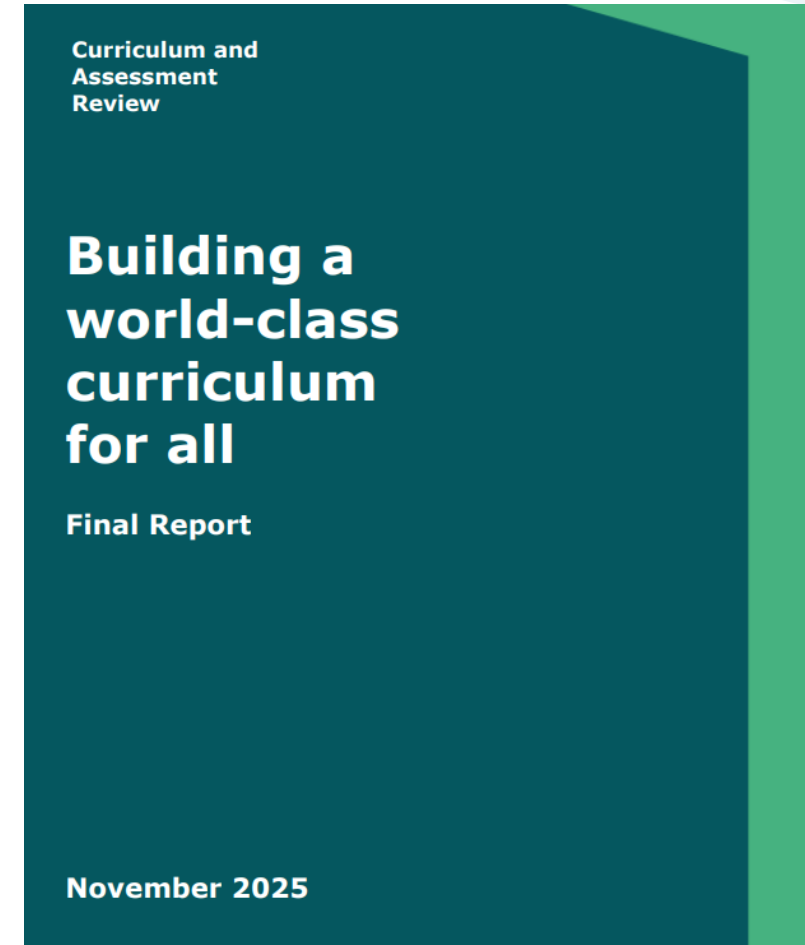
What are the implications?



Curriculum and Assessment Review – Final Report

The current system is not working well for everyone

The socio-economic gap in relation to educational attainment remains stubbornly wide, and young people with special educational needs and disabilities (SEND) make less progress than their peers.



https://assets.publishing.service.gov.uk/media/690b96bbc22e4ed8b051854d/Curriculum_and_Assessment_Review_final_report_-_Building_a_world-class_curriculum_for_all.pdf

Ofsted subject report



Research and analysis

Coordinating mathematical success: the mathematics subject report

Published 13 July 2023

Ofsted subject report

Pupils who are learning mathematics more slowly than their peers frequently receive a mathematics education that does not meet their needs.

They are often rushed through the study of new content, in order to ‘complete the course’, without securely learning what they are studying.

This frequently results in pupils repeating content, in key stage 4 that they have already studied, but not learned, in key stage 3 (and 2).

Many of these pupils develop a negative view of mathematics.

...some pupils would be better served by studying less, but securely learning more.

The achievement gap

Key Stage 2 maths (SATs) – 2025

Meeting the expected standard – all pupils	74%
Meeting the expected standard – no SEN provision	84%
Meeting the expected standard – SEN provision	40%

Pupils receiving SEN provision were approx. 23% of the total cohort, but approx. 45% of the cohort who did not achieve the expected standard

Key Stage 4 maths (GCSE) – 2025

Achieving grade 9 – 4 – all pupils	72%
Achieving grade 9 – 4 – no identified SEN	78%
Achieving grade 9 – 4 – identified SEN	44%

Pupils with identified SEN were approx. 17% of the total cohort, but approx. 33% of the cohort who did not achieve grade 9 – 4

Making progress – 2024/5 leavers achievement data

Students with a Grade 1 at the end of Year 11:

Grade 1	Grade 2	Grade 3	Grade 4
87.7%	10.3%	1.5%	0.4%

Students with a Grade 2 at the end of Year 11:

Grade 1	Grade 2	Grade 3	Grade 4
-	80.8%	15.4%	3.6%

Students with a Grade 3 at the end of Year 11:

Grade 1	Grade 2	Grade 3	Grade 4
-	-	69.5%	29.3%

Making progress – 2024/5 leavers achievement data

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Students with a Grade 3 at the end of Year 11:

Grade 1	Grade 2	Grade 3	Grade 4
-	-	69.5%	29.3%

28,824
students

'English and maths attainment and grade progress between ages 16 and 19 (includes region, disadvantaged status and SEN)' from 'Level 2 and 3 attainment age 16 to 25', Permanent data table - Explore education statistics - GOV.UK



One approach

Born of Frustration



Specification



Available
time



Student

Born of Frustration



Specification

Weekly Unit (Foundation)	Title
1	Groundwork: Number
2	Groundwork: Algebra
3	Groundwork: Geometry
4	Groundwork: Statistics
5	Percentages
6	Indices and roots
7	Algebraic manipulation
8	Straight-line graphs
9	Angle facts
10	Accuracy
11	Circles
12	Equations and inequalities
13	Probability
14	Sequences
15	Constructions
16	Quadratics
17	Quadratic graphs
18	Ratio and compound measures
19	Proportion
20	Simultaneous equations
21	Pythagoras' theorem
22	Statistical graphs and measures
23	Transformations of shapes and vectors
24	Bivariate data
25	Sampling
26	Probability of combined events
27	Volume and surface area
28	Trigonometry
29	Further graphs
30	Mathematical arguments

Born of Frustration



Specification

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14	Sequences



Specification

14	Sequences
15	Constructions
16	Quadratics
17	Quadratic graphs
18	Ratio and compound measures
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30	Mathematical arguments

Born of Frustration



Available
time

“Most students (perhaps 90%) can master what we have to teach them, if given enough time”

Bloom, 1968

Born of Frustration



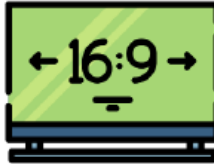
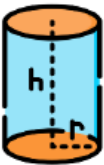
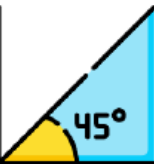
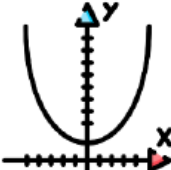
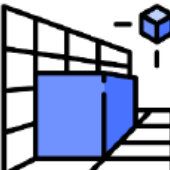
Student

HELLO

my name is

Failure

The Focused 15

This is YOUR year!				
FF01 Types of Number 	FF02 Using Number 	FF03 Simple Probability 	FF04 Ratio 	FF05 Measures 
FF06 Rounding & Approximation 	FF07 Perimeter, Area & Volume 	FF08 Proportion 	FF09 Simplify & Solve 	FF10 Percentages 
FF11 Angle Properties 	FF12 Representing Data 	FF13 Solve & Graph 	FF14 Averages & Spread 	FF15 Transformations 

Pearson Edexcel – The Maths Emporium



Category: 08 Grade Boundaries & Skills Maps

Grade boundaries for the GCSE Mathematics (1MA1) examinations which were first examined in Summer 2017. Statistical data about mark distributions and breakdowns of results by centre type, age and sex are also included.

01 June 2017	02 November 2017	03 June 2018	04 November 2018	05 June 2019	06 November 2019	07 June 2020
08 November 2020	09 June 2021	10 November 2021	11 June 2022	12 November 2022	13 June 2023	14 November 2023
15 June 2024	16 November 2024	17 June 2025	18 November 2025	Enhanced Skills Map		

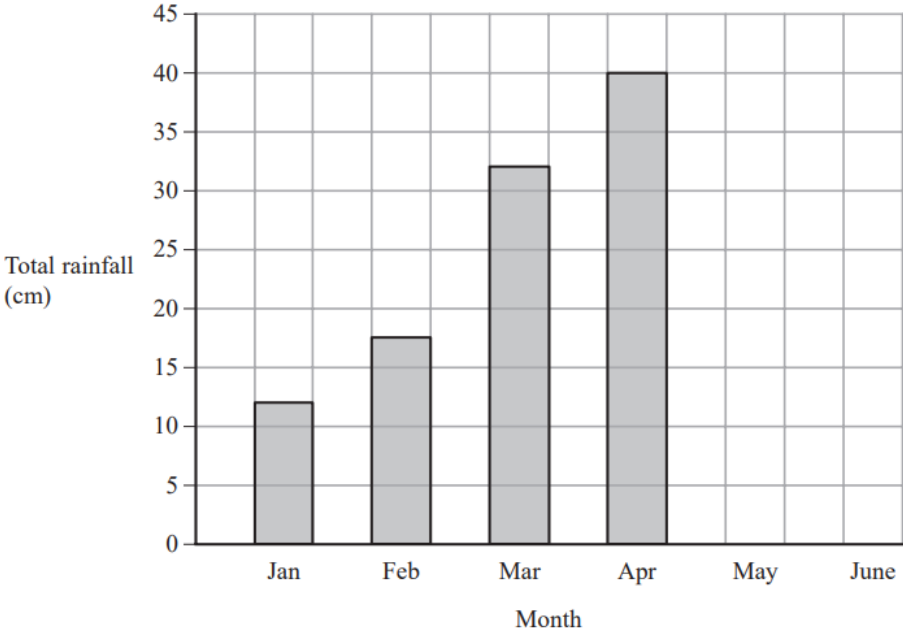
1MA1 - June 2022				Edexcel averages: mean scores of students who achieved grade								
Topic	Spec Ref	AO	Question	Skill tested	Max score	ALL	5	4	3	2	1	U
Paper 1F NON CALCULATOR (F)												
Ratio	R1	1	Q01	Change between standard units and compound units	1	0.67	0.87	0.77	0.67	0.59	0.49	0.32
Algebra	A4	1	Q02	Simplify and manipulate expressions using laws of indices	1	0.73	0.90	0.81	0.73	0.66	0.61	0.51
Geometry	G7	1	Q03	Transformations	1	0.92	0.99	0.98	0.95	0.90	0.80	0.60
Number	N2	1	Q04	Apply four operations	1	0.88	0.97	0.96	0.92	0.86	0.71	0.45
Number	N1	1	Q05	Order numbers	1	0.76	0.98	0.94	0.85	0.66	0.38	0.19
Statistics	S2	2	Q06	Pictograms	1	0.92	0.95	0.94	0.93	0.92	0.89	0.76
Number	N13, N2	3	Q07	Apply four operations	3	2.70	2.97	2.93	2.84	2.64	2.18	1.47
Statistics	S2	2	Q08a	Bar charts	2	1.90	1.97	1.96	1.94	1.90	1.79	1.38
Statistics	S2	2	Q08b	Bar charts	1	0.58	0.83	0.72	0.60	0.47	0.31	0.16
Algebra	A23	2	Q09a	Linear and non-linear sequences of diagrams and numbers	1	0.93	0.99	0.98	0.96	0.93	0.85	0.65
Algebra	A23	3	Q09b	Linear and non-linear sequences of diagrams and numbers	1	0.96	1.00	0.99	0.98	0.96	0.90	0.70
Number	N2	3	Q10	Apply four operations	2	1.53	1.91	1.81	1.64	1.38	0.95	0.50
Ratio	R11, N13	3	Q11	Apply four operations	4	1.41	2.48	1.88	1.41	0.96	0.49	0.20
Number	N2	1	Q12a	Calculate exactly with fractions	2	1.22	1.92	1.73	1.31	0.80	0.35	0.11
Number	N2	1	Q12b	Calculate exactly with fractions	2	1.06	1.73	1.40	1.02	0.72	0.54	0.40
Probability	P3	1	Q13a	Theoretical probability; appropriate language; 0-1 probabilities	1	0.72	0.97	0.90	0.79	0.61	0.36	0.16
Probability	P4	1	Q13b	Probabilities of an exhaustive set of outcomes	1	0.74	0.99	0.96	0.85	0.61	0.29	0.13
Algebra	A2	1	Q14	Substitute values into formulae and expressions	2	1.53	1.97	1.91	1.75	1.35	0.66	0.24
Number	N14	1	Q15a	Approximation and estimation	2	1.20	1.89	1.74	1.36	0.73	0.22	0.07
Number	N2	2	Q15b	Apply four operations	1	0.34	0.69	0.50	0.32	0.17	0.07	0.03
Ratio	R11, G14	3	Q16a	Use standard units of measure and related concepts	3	1.03	2.01	1.41	0.98	0.61	0.32	0.15
Ratio	R11	3	Q16b	Use standard units of measure and related concepts	1	0.64	0.92	0.80	0.65	0.51	0.35	0.19
Probability	N2, P1	2	Q17a	Enumerate sets and combinations of sets systematically	3	2.70	2.95	2.92	2.87	2.73	2.18	1.10
Probability	P8	2	Q17b	Theoretical probability; appropriate language; 0-1 probabilities	2	1.13	1.59	1.45	1.25	0.93	0.45	0.14
Ratio	R5, R10	1	Q18	Solve problems involving direct and inverse proportion	2	1.52	1.94	1.85	1.66	1.33	0.87	0.45
Statistics	S2	2	Q19	Percentages and problems involving percentage change	3	1.93	2.91	2.74	2.24	1.24	0.42	0.16
Number	N2, N8	3	Q20	Calculate exactly with fractions	3	0.41	1.24	0.60	0.26	0.11	0.06	0.03
Ratio	R9	1	Q21	Stem and leaf diagrams	3	1.85	2.75	2.46	2.00	1.39	0.70	0.23
Geometry	G13, G16	3	Q22	Plans and elevations of 3D shapes	3	0.58	1.95	0.95	0.28	0.05	0.01	0.00
Algebra	A22	1	Q23	Solve linear inequalities	2	0.65	1.61	1.03	0.51	0.20	0.06	0.02
Number	N4	1	Q24	Primes, factors, multiples	2	0.96	1.79	1.48	0.98	0.46	0.13	0.03
Ratio	R9, R5, R4	3	Q25	Ratio in real context	5	1.94	4.39	3.32	1.69	0.50	0.15	0.04
Number	N9	1	Q26a	Standard form	1	0.38	0.83	0.62	0.33	0.13	0.04	0.01
Number	N9	1	Q26b	Standard form	1	0.40	0.87	0.66	0.35	0.14	0.04	0.01
Number	N9	1	Q26c	Standard form	2	0.40	1.10	0.64	0.27	0.09	0.02	0.01
Geometry	G3	3	Q27	Exterior and interior angles	3	0.57	2.05	0.91	0.24	0.05	0.01	0.00
Algebra	A2	1	Q28a	Substitute values into formulae and expressions	2	0.49	1.45	0.85	0.29	0.07	0.02	0.01
Algebra	A14	2	Q28b	Graphs of quadratic functions	2	0.41	1.25	0.70	0.23	0.04	0.01	0.00
Algebra	A18	2	Q28c	Roots, intercepts, turning points of quadratic functions	2	0.15	0.71	0.20	0.04	0.01	0.00	0.00
Ratio	R4, R11, G14	3	Q29	Use compound units	3	0.45	1.82	0.65	0.14	0.03	0.01	0.00
Geometry	G21	1	Q30	Exact values of $\sin \theta$ and $\cos \theta$ and $\tan \theta$	1	0.24	0.60	0.38	0.19	0.08	0.03	0.01

Question	Skill tested	Edexcel averages: mean scores of students who achieved grade							
		Max score	ALL	5	4	3	2	1	U
Q01	Change between standard units and compound units	1	0.67	0.87	0.77	0.67	0.59	0.49	0.32
Q02	Simplify and manipulate expressions using laws of indices	1	0.73	0.90	0.81	0.73	0.66	0.61	0.51
Q03	Transformations	1	0.92	0.99	0.98	0.95	0.90	0.80	0.60
Q04	Apply four operations	1	0.88	0.97	0.96	0.92	0.86	0.71	0.45
Q05	Order numbers	1	0.76	0.98	0.94	0.85	0.66	0.38	0.19
Q06	Pictograms	1	0.92	0.95	0.94	0.93	0.92	0.89	0.76
Q07	Apply four operations	3	2.70	2.97	2.93	2.84	2.64	2.18	1.47
Q08a	Bar charts	2	1.90	1.97	1.96	1.94	1.90	1.79	1.38
Q08b	Bar charts	1	0.58	0.83	0.72	0.60	0.47	0.31	0.16
Q09a	Linear and non-linear sequences of diagrams and numbers	1	0.93	0.99	0.98	0.96	0.93	0.85	0.65
Q09b	Linear and non-linear sequences of diagrams and numbers	1	0.96	1.00	0.99	0.98	0.96	0.90	0.70
Q10	Apply four operations	2	1.53	1.91	1.81	1.64	1.38	0.95	0.50
Q11	Apply four operations	4	1.41	2.48	1.88	1.41	0.96	0.49	0.20
Q12a	Calculate exactly with fractions	2	1.22	1.92	1.73	1.31	0.80	0.35	0.11
Q12b	Calculate exactly with fractions	2	1.06	1.73	1.40	1.02	0.72	0.54	0.40
Q13a	Theoretical probability; appropriate language; 0-1 probabilities	1	0.72	0.97	0.90	0.79	0.61	0.36	0.16
Q13b	Probabilities of an exhaustive set of outcomes	1	0.74	0.99	0.96	0.85	0.61	0.29	0.13
Q14	Substitute values into formulae and expressions	2	1.53	1.97	1.91	1.75	1.35	0.66	0.24
Q15a	Approximation and estimation	2	1.20	1.89	1.74	1.36	0.73	0.22	0.07
Q15b	Apply four operations	1	0.34	0.69	0.50	0.32	0.17	0.07	0.03
Q16a	Use standard units of measure and related concepts	3	1.03	2.01	1.41	0.98	0.61	0.32	0.15
Q16b	Use standard units of measure and related concepts	1	0.64	0.92	0.80	0.65	0.51	0.35	0.19
Q17a	Enumerate sets and combinations of sets systematically	3	2.70	2.95	2.92	2.87	2.73	2.18	1.10
Q17b	Theoretical probability; appropriate language; 0-1 probabilities	2	1.13	1.59	1.45	1.25	0.93	0.45	0.14
Q18	Solve problems involving direct and inverse proportion	2	1.52	1.94	1.85	1.66	1.33	0.87	0.45
Q19	Percentages and problems involving percentage change	3	1.93	2.81	2.74	2.34	1.24	0.42	0.18

GCSE exam question

Edexcel Paper 1F Q8a Summer 2022 [3 marks]

The bar chart shows information about the total rainfall each month for four months in a city.



In May, the total rainfall was 35 cm.
In June, the total rainfall was 20 cm.

(a) Use this information to complete the bar chart.

Maximum score	2
Overall mean score	1.90
Grade 5 mean score	1.97
Grade 4 mean score	1.96
Grade 3 mean score	1.94
Grade 2 mean score	1.90
Grade 1 mean score	1.79
Grade U mean score	1.38

Question	Skill tested	Edexcel averages: mean scores of students who achieved grade							
		Max score	ALL	5	4	3	2	1	U
Q01	Change between standard units and compound units	1	0.67	0.87	0.77	0.67	0.59	0.49	0.32
Q02	Simplify and manipulate expressions using laws of indices	1	0.73	0.90	0.81	0.73	0.66	0.61	0.51
Q03	Transformations	1	0.92	0.99	0.98	0.95	0.90	0.80	0.60
Q04	Apply four operations	1	0.88	0.97	0.96	0.92	0.86	0.71	0.45
Q05	Order numbers	1	0.76	0.98	0.94	0.85	0.66	0.38	0.19
Q06	Pictograms	1	0.92	0.95	0.94	0.93	0.92	0.89	0.76
Q07	Apply four operations	3	2.70	2.97	2.93	2.84	2.64	2.18	1.47
Q08a	Bar charts	2	1.90	1.97	1.96	1.94	1.90	1.79	1.38
Q08b	Bar charts	1	0.58	0.83	0.72	0.60	0.47	0.31	0.16
Q09a	Linear and non-linear sequences of diagrams and numbers	1	0.93	0.99	0.98	0.96	0.93	0.85	0.65
Q09b	Linear and non-linear sequences of diagrams and numbers	1	0.96	1.00	0.99	0.98	0.96	0.90	0.70
Q10	Apply four operations	2	1.53	1.91	1.81	1.64	1.38	0.95	0.50
Q11	Apply four operations	4	1.41	2.48	1.88	1.41	0.96	0.49	0.20
Q12a	Calculate exactly with fractions	2	1.22	1.92	1.73	1.31	0.80	0.35	0.11
Q12b	Calculate exactly with fractions	2	1.06	1.73	1.40	1.02	0.72	0.54	0.40
Q13a	Theoretical probability; appropriate language; 0-1 probabilities	1	0.72	0.97	0.90	0.79	0.61	0.36	0.16
Q13b	Probabilities of an exhaustive set of outcomes	1	0.74	0.99	0.96	0.85	0.61	0.29	0.13
Q14	Substitute values into formulae and expressions	2	1.53	1.97	1.91	1.75	1.35	0.66	0.24
Q15a	Approximation and estimation	2	1.20	1.89	1.74	1.36	0.73	0.22	0.07
Q15b	Apply four operations	1	0.34	0.69	0.50	0.32	0.17	0.07	0.03
Q16a	Use standard units of measure and related concepts	3	1.03	2.01	1.41	0.98	0.61	0.32	0.15
Q16b	Use standard units of measure and related concepts	1	0.64	0.92	0.80	0.65	0.51	0.35	0.19
Q17a	Enumerate sets and combinations of sets systematically	3	2.70	2.95	2.92	2.87	2.73	2.18	1.10
Q17b	Theoretical probability; appropriate language; 0-1 probabilities	2	1.13	1.59	1.45	1.25	0.93	0.45	0.14
Q18	Solve problems involving direct and inverse proportion	2	1.52	1.94	1.85	1.66	1.33	0.87	0.45
Q19	Percentages and problems involving percentage change	3	1.93	2.81	2.74	2.34	1.24	0.42	0.18

003	Transformations		1	0.92	0.99	0.98	0.95	0.90	0.80	0.60
004	Apply four operations		1	0.88	0.97	0.96	0.92	0.86	0.71	0.45
005	Order numbers		1	0.76	0.98	0.94	0.85	0.66	0.38	0.19
006	Pictograms		1	0.92	0.95	0.94	0.93	0.92	0.89	0.76
007	Apply four operations		3	2.70	2.97	2.93	2.84	2.64	2.18	1.47
008a	Bar charts		2	1.90	1.97	1.96	1.94	1.90	1.79	1.38
008b	Bar charts		1	0.58	0.83	0.72	0.60	0.47	0.31	0.16
009a	Linear and non-linear sequences of diagrams and numbers		1	0.93	0.99	0.98	0.96	0.93	0.85	0.65
009b	Linear and non-linear sequences of diagrams and numbers		1	0.96	1.00	0.99	0.98	0.96	0.90	0.70
010	Apply four operations		2	1.53	1.91	1.81	1.64	1.38	0.95	0.50
011	Apply four operations		4	1.41	2.48	1.88	1.41	0.96	0.49	0.20
012a	Calculate exactly with fractions		2	1.22	1.92	1.73	1.31	0.80	0.35	0.11
012b	Calculate exactly with fractions		2	1.06	1.73	1.40	1.02	0.72	0.54	0.40
013a	Theoretical probability; appropriate language; 0-1 probability		1	0.72	0.97	0.90	0.79	0.61	0.36	0.16
013b	Probabilities of an exhaustive set of outcomes		1	0.74	0.99	0.96	0.85	0.61	0.29	0.13
014	Substitute values into formulae and expressions		2	1.53	1.97	1.91	1.75	1.35	0.66	0.24
015a	Approximation and estimation		2	1.20	1.89	1.74	1.36	0.73	0.22	0.07
015b	Apply four operations		1	0.34	0.69	0.50	0.32	0.17	0.07	0.03
016a	Use standard units of measure and related concepts		3	1.03	2.01	1.41	0.98	0.61	0.32	0.15
016b	Use standard units of measure and related concepts		1	0.64	0.92	0.80	0.65	0.51	0.35	0.19
017a	Enumerate sets and combinations of sets systematically		3	2.70	2.95	2.92	2.87	2.73	2.18	1.10
017b	Theoretical probability; appropriate language; 0-1 probability		2	1.13	1.59	1.45	1.25	0.93	0.45	0.14
018	Solve problems involving direct and inverse proportion		2	1.52	1.94	1.85	1.66	1.33	0.87	0.45
019	Percentages and problems involving percentage change		3	1.93	2.91	2.74	2.24	1.24	0.42	0.16
020	Calculate exactly with fractions		3	0.41	1.24	0.60	0.26	0.11	0.06	0.03
021	Stem and leaf diagrams		3	1.85	2.75	2.46	2.00	1.39	0.70	0.23
022	Plans and elevations of 3D shapes		3	0.58	1.95	0.95	0.28	0.05	0.01	0.00
023	Solve linear inequalities		2	0.65	1.61	1.03	0.51	0.20	0.06	0.02
024	Primes, factors, multiples		2	0.96	1.79	1.48	0.98	0.46	0.13	0.03
025	Ratio in real context		5	1.94	4.39	3.32	1.69	0.50	0.15	0.04
026a	Standard form		1	0.38	0.83	0.62	0.33	0.13	0.04	0.01

GCSE exam question

Edexcel Paper 1F Q19 Summer 2022 [3 marks]

Increase 240 by 20%

19% of 2,300 =

Maximum score	3
Overall mean score	1.93
Grade 5 mean score	2.91
Grade 4 mean score	2.74
Grade 3 mean score	2.24
Grade 2 mean score	1.24
Grade 1 mean score	0.42
Grade U mean score	0.16

003	Transformations		1	0.92	0.99	0.98	0.95	0.90	0.80	0.60
004	Apply four operations		1	0.88	0.97	0.96	0.92	0.86	0.71	0.45
005	Order numbers		1	0.76	0.98	0.94	0.85	0.66	0.38	0.19
006	Pictograms		1	0.92	0.95	0.94	0.93	0.92	0.89	0.76
007	Apply four operations		3	2.70	2.97	2.93	2.84	2.64	2.18	1.47
008a	Bar charts		2	1.90	1.97	1.96	1.94	1.90	1.79	1.38
008b	Bar charts		1	0.58	0.83	0.72	0.60	0.47	0.31	0.16
009a	Linear and non-linear sequences of diagrams and numbers		1	0.93	0.99	0.98	0.96	0.93	0.85	0.65
009b	Linear and non-linear sequences of diagrams and numbers		1	0.96	1.00	0.99	0.98	0.96	0.90	0.70
010	Apply four operations		2	1.53	1.91	1.81	1.64	1.38	0.95	0.50
011	Apply four operations		4	1.41	2.48	1.88	1.41	0.96	0.49	0.20
012a	Calculate exactly with fractions		2	1.22	1.92	1.73	1.31	0.80	0.35	0.11
012b	Calculate exactly with fractions		2	1.06	1.73	1.40	1.02	0.72	0.54	0.40
013a	Theoretical probability; appropriate language; 0-1 probability		1	0.72	0.97	0.90	0.79	0.61	0.36	0.16
013b	Probabilities of an exhaustive set of outcomes		1	0.74	0.99	0.96	0.85	0.61	0.29	0.13
014	Substitute values into formulae and expressions		2	1.53	1.97	1.91	1.75	1.35	0.66	0.24
015a	Approximation and estimation		2	1.20	1.89	1.74	1.36	0.73	0.22	0.07
015b	Apply four operations		1	0.34	0.69	0.50	0.32	0.17	0.07	0.03
016a	Use standard units of measure and related concepts		3	1.03	2.01	1.41	0.98	0.61	0.32	0.15
016b	Use standard units of measure and related concepts		1	0.64	0.92	0.80	0.65	0.51	0.35	0.19
017a	Enumerate sets and combinations of sets systematically		3	2.70	2.95	2.92	2.87	2.73	2.18	1.10
017b	Theoretical probability; appropriate language; 0-1 probability		2	1.13	1.59	1.45	1.25	0.93	0.45	0.14
018	Solve problems involving direct and inverse proportion		2	1.52	1.94	1.85	1.66	1.33	0.87	0.45
019	Percentages and problems involving percentage change		3	1.93	2.91	2.74	2.24	1.24	0.42	0.16
020	Calculate exactly with fractions		3	0.41	1.24	0.60	0.26	0.11	0.06	0.03
021	Stem and leaf diagrams		3	1.85	2.75	2.46	2.00	1.39	0.70	0.23
022	Plans and elevations of 3D shapes		3	0.58	1.95	0.95	0.28	0.05	0.01	0.00
023	Solve linear inequalities		2	0.65	1.61	1.03	0.51	0.20	0.06	0.02
024	Primes, factors, multiples		2	0.96	1.79	1.48	0.98	0.46	0.13	0.03
025	Ratio in real context		5	1.94	4.39	3.32	1.69	0.50	0.15	0.04
026a	Standard form		1	0.38	0.83	0.62	0.33	0.13	0.04	0.01

10	Apply four operations	2	1.53	1.91	1.81	1.64	1.38	0.95	0.50
11	Apply four operations	4	1.41	2.48	1.88	1.41	0.96	0.49	0.20
12a	Calculate exactly with fractions	2	1.22	1.92	1.73	1.31	0.80	0.35	0.11
12b	Calculate exactly with fractions	2	1.06	1.73	1.40	1.02	0.72	0.54	0.40
13a	Theoretical probability; appropriate language; 0-1 probab	1	0.72	0.97	0.90	0.79	0.61	0.36	0.16
13b	Probabilities of an exhaustive set of outcomes	1	0.74	0.99	0.96	0.85	0.61	0.29	0.13
14	Substitute values into formulae and expressions	2	1.53	1.97	1.91	1.75	1.35	0.66	0.24
15a	Approximation and estimation	2	1.20	1.89	1.74	1.36	0.73	0.22	0.07
15b	Apply four operations	1	0.34	0.69	0.50	0.32	0.17	0.07	0.03
16a	Use standard units of measure and related concepts	3	1.03	2.01	1.41	0.98	0.61	0.32	0.15
16b	Use standard units of measure and related concepts	1	0.64	0.92	0.80	0.65	0.51	0.35	0.19
17a	Enumerate sets and combinations of sets systematical	3	2.70	2.95	2.92	2.87	2.73	2.18	1.10
17b	Theoretical probability; appropriate language; 0-1 probab	2	1.13	1.59	1.45	1.25	0.93	0.45	0.14
18	Solve problems involving direct and inverse proportion	2	1.52	1.94	1.85	1.66	1.33	0.87	0.45
19	Percentages and problems involving percentage change	3	1.93	2.91	2.74	2.24	1.24	0.42	0.16
20	Calculate exactly with fractions	3	0.41	1.24	0.60	0.26	0.11	0.06	0.03
21	Stem and leaf diagrams	3	1.85	2.75	2.46	2.00	1.39	0.70	0.23
22	Plans and elevations of 3D shapes	3	0.58	1.95	0.95	0.28	0.05	0.01	0.00
23	Solve linear inequalities	2	0.65	1.61	1.03	0.51	0.20	0.06	0.02
24	Primes, factors, multiples	2	0.96	1.79	1.48	0.98	0.46	0.13	0.03
25	Ratio in real context	5	1.94	4.39	3.32	1.69	0.50	0.15	0.04
26a	Standard form	1	0.38	0.83	0.62	0.33	0.13	0.04	0.01
26b	Standard form	1	0.40	0.87	0.66	0.35	0.14	0.04	0.01
26c	Standard form	2	0.40	1.10	0.64	0.27	0.09	0.02	0.01
27	Exterior and interior angles	3	0.57	2.05	0.91	0.24	0.05	0.01	0.00
28a	Substitute values into formulae and expressions	2	0.49	1.45	0.85	0.29	0.07	0.02	0.01
28b	Graphs of quadratic functions	2	0.41	1.25	0.70	0.23	0.04	0.01	0.00
28c	Roots, intercepts, turning points of quadratic functions	2	0.15	0.71	0.20	0.04	0.01	0.00	0.00
29	Use compound units	3	0.45	1.82	0.65	0.14	0.03	0.01	0.00
30	Exact values of $\sin \theta$ and $\cos \theta$ and $\tan \theta$	1	0.24	0.60	0.38	0.19	0.08	0.03	0.01

GCSE exam question

Edexcel Paper 1F Q25 Summer 2022 [5 marks]

A delivery company has a total of 160 cars and vans.

the number of cars : the number of vans = 3 : 7

Each car and each van uses electricity or diesel or petrol.

$\frac{1}{8}$ of the cars use electricity.

25% of the cars use diesel.

The rest of the cars use petrol.

Work out the number of cars that use petrol.

You must show all your working.

GSCE exam question

Edexcel Paper 1F Summer 2022 [5 marks]

A delivery company has a total of 160 cars and vans.

the number of cars : the number of vans = 3 : 7

Each car and each van uses electricity or diesel or petrol.

$\frac{1}{8}$ of the cars use electricity.

25% of the cars use diesel.

The rest of the cars use petrol.

Work out the number of cars that use petrol.

You must show all your working.

Maximum score	5
Overall mean score	1.94
Grade 5 mean score	4.39
Grade 4 mean score	3.32
Grade 3 mean score	1.69
Grade 2 mean score	0.50
Grade 1 mean score	0.15
Grade U mean score	0.04



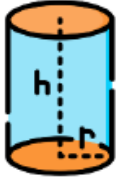
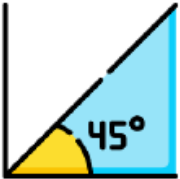
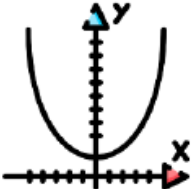
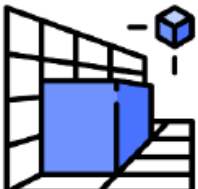
Because maths matters!

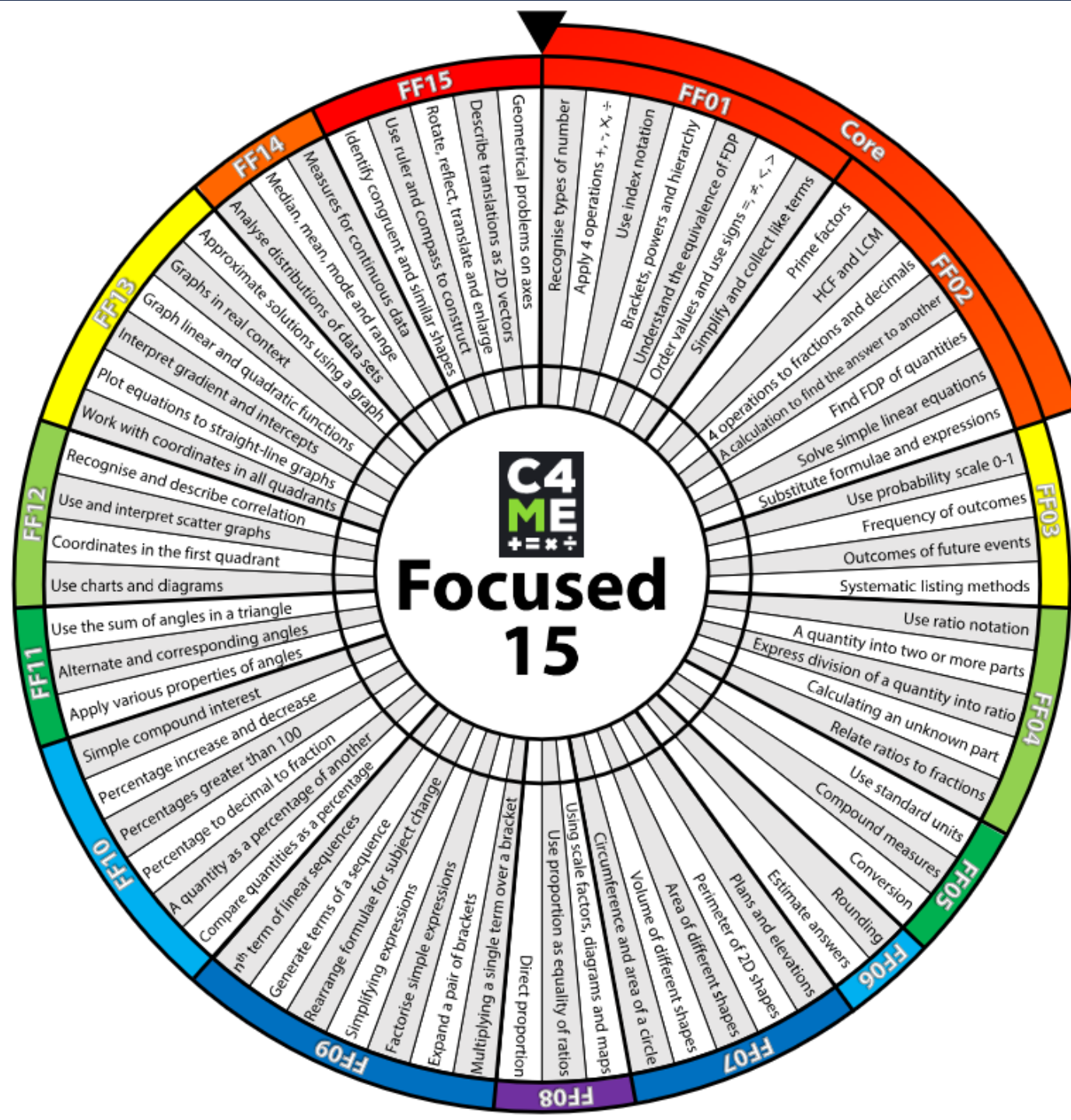


The Focused 15

The Focused 15

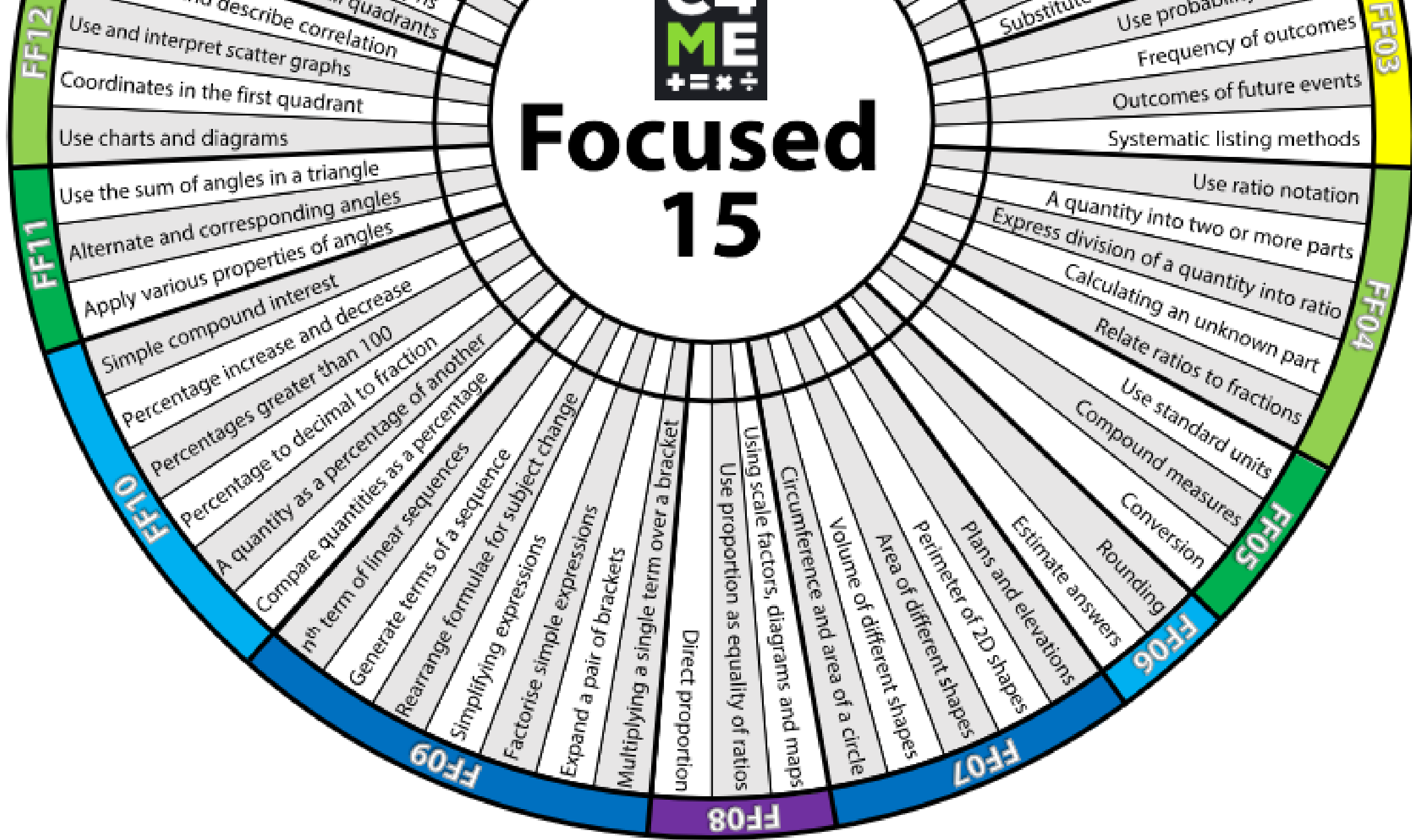
This is **YOUR** year!

FF01 Types of Number 	FF02 Using Number 	FF03 Simple Probability 	FF04 Ratio 	FF05 Measures 
FF06 Rounding & Approximation 	FF07 Perimeter, Area & Volume 	FF08 Proportion 	FF09 Simplify & Solve 	FF10 Percentages 
FF11 Angle Properties 	FF12 Representing Data 	FF13 Solve & Graph 	FF14 Averages & Spread 	FF15 Transformations 





Focused 15

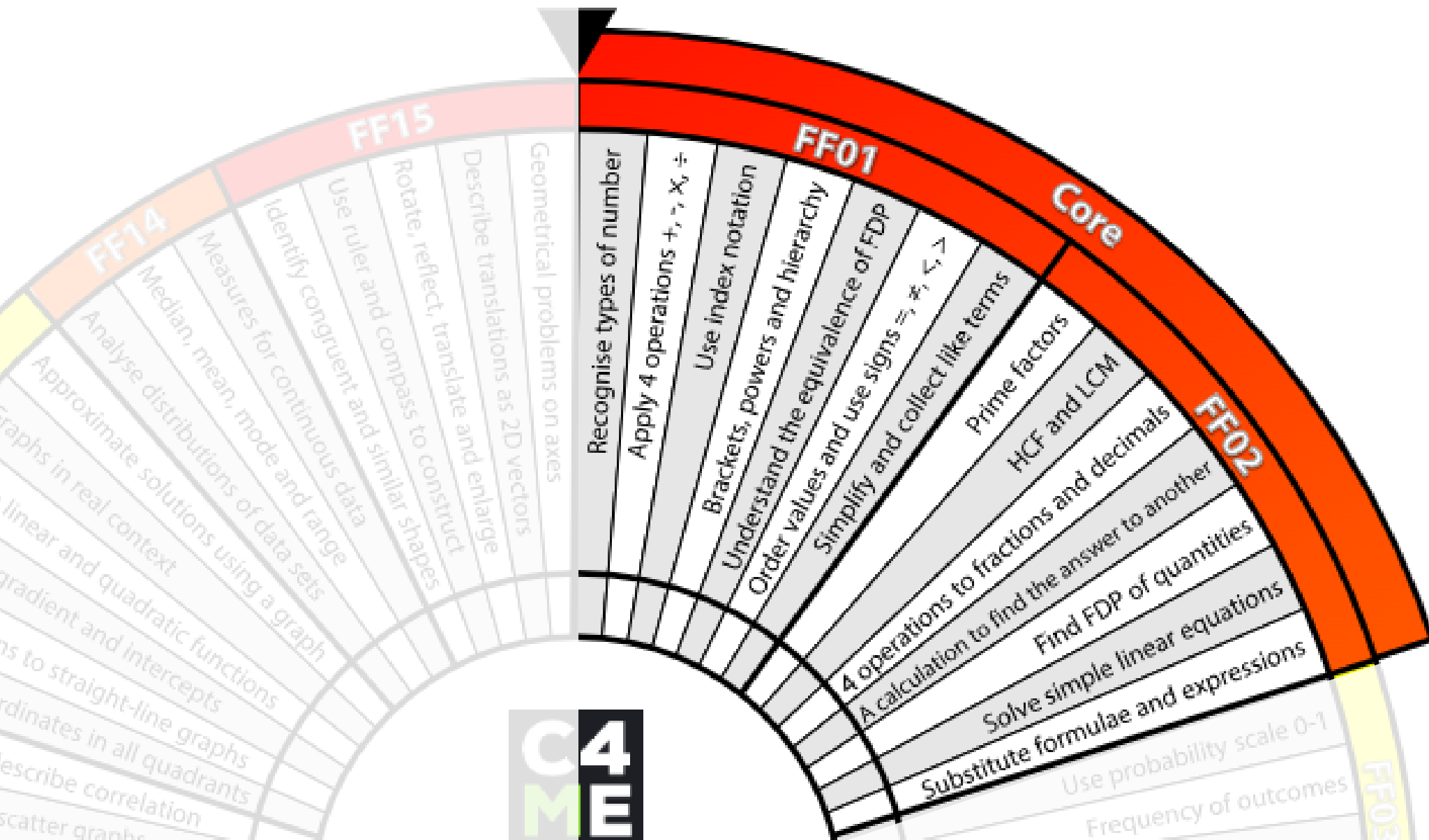




Because maths matters!

A large, stylized green arrow pointing to the right, composed of two overlapping chevron shapes.

Zooming in on the core



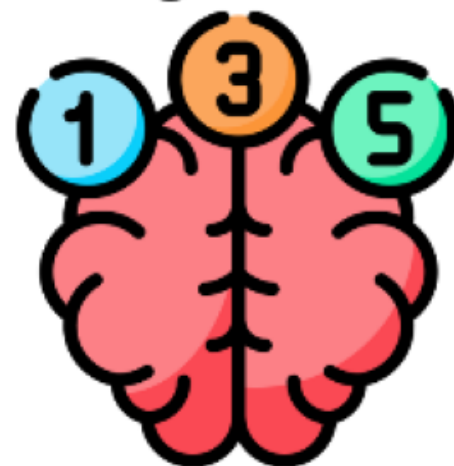
FF01

Types of Number



FF02

Using Number





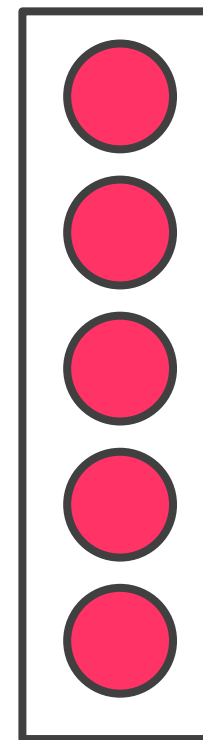
FF01 – Types of Number

1. Recognise types of number – prime, odd, even, square, cube, etc.
2. Apply 4 operations (+, -, $\times$, $\div$), including written methods for integers.
3. Use index notation.
4. Use brackets, powers and hierarchy of operations correctly.
5. Understand the equivalence of fractions, decimals and percentages.
6. Order positive and negative numbers, including fractions and decimals. Use signs =, $\neq$, $<$, $>$.
7. Simplify and manipulate algebraic expressions by collecting like terms.



FF02 – Using Number

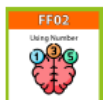
8. Write a number as a product of its prime factors.
9. Find and use 'highest common factors' and 'lowest common multiples'.
10. Extend application of 4 operations (+, -, $\times$, $\div$), to include fractions and decimals.
11. Use one calculation to find the answer to another.
12. Find fractions, decimals and percentages of quantities.
13. Solve simple linear equations.
14. Substitute values into formulae and expressions.





FF01 – Types of Number

1. Recognise types of number – prime, odd, even, square, cube, etc.
2. Apply 4 operations (+, -, $\times$, $\div$), including written methods for integers.
3. Use index notation.
4. Use brackets, powers and hierarchy of operations correctly.
5. Understand the equivalence of fractions, decimals and percentages.
6. Order positive and negative numbers, including fractions and decimals. Use signs =, $\neq$, $<$, $>$.
7. Simplify and manipulate algebraic expressions by collecting like terms.



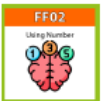
FF02 – Using Number

8. Write a number as a product of its prime factors.
9. Find and use 'highest common factors' and 'lowest common multiples'.
10. Extend application of 4 operations (+, -, $\times$, $\div$), to include fractions and decimals.
11. Use one calculation to find the answer to another.
12. Find fractions, decimals and percentages of quantities.
13. Solve simple linear equations.
14. Substitute values into formulae and expressions.



FF01 – Types of Number

1. Recognise types of number – prime, odd, even, square, cube, etc.
2. Apply 4 operations (+, -, ×, ÷), including written methods for integers.
3. Use index notation.
4. Use brackets, powers and hierarchy of operations correctly.
5. Understand the equivalence of fractions, decimals and percentages.
6. Order positive and negative numbers, including fractions and decimals. Use signs =, ≠, <, >.
7. Simplify and manipulate algebraic expressions by collecting like terms.



FF02 – Using Number

8. Write a number as a product of its prime factors.
9. Find and use 'highest common factors' and 'lowest common multiples'.
10. Extend application of 4 operations (+, -, ×, ÷), to include fractions and decimals.
11. Use one calculation to find the answer to another.
12. Find fractions, decimals and percentages of quantities.
13. Solve simple linear equations.
14. Substitute values into formulae and expressions.

In pairs, decide which 5 of these skills has the most impact on the rest of the curriculum.

MAKE SURE YOU AGREE AND CAN BACK UP YOUR DECISIONS

Use the dot stickers to mark them on your sheets.

Compare your choices with a neighbouring pair – any surprised or disagreements?

Exploring the impact

Please check the examination details below before entering your candidate information

Candidate surname		Other names	
Centre Number		Candidate Number	

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Thursday 15 May 2025

Morning (Time: 1 hour 30 minutes) **Paper reference** **1MA1/1F**

Mathematics
PAPER 1 (Non-Calculator)
Foundation Tier



You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB or B pencil, eraser, Formulae Sheet (enclosed). Tracing paper may be used.

Total Marks



FF01 – Types of Number

1. Recognise types of number – prime, odd, even, square, cube, etc.
2. Apply 4 operations (+, -, ×, ÷), including written methods for integers.
3. Use index notation.
4. Use brackets, powers and hierarchy of operations correctly.
5. Understand the equivalence of fractions, decimals and percentages.
6. Order positive and negative numbers, including fractions and decimals. Use signs =, ≠, <, >.
7. Simplify and manipulate algebraic expressions by collecting like terms.



FF02 – Using Number

8. Write a number as a product of its prime factors.
9. Find and use 'highest common factors' and 'lowest common multiples'.
10. Extend application of 4 operations (+, -, ×, ÷), to include fractions and decimals.
11. Use one calculation to find the answer to another.
12. Find fractions, decimals and percentages of quantities.
13. Solve simple linear equations.
14. Substitute values into formulae and expressions.

Exploring the impact

Please check the examination details below before entering your candidate information

Candidate surname Other names

Centre Number Candidate Number

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Thursday 15 May 2025

Morning (Time: 1 hour 30 minutes) Paper reference **1MA1/1F**

Mathematics
PAPER 1 (Non-Calculator)
Foundation Tier

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB or B pencil, eraser, Formulae Sheet (enclosed). Tracing paper may be used.

Total Marks

FF01 – Types of Number

Recognise types of number – prime, odd, even, square, cube, etc.
Apply 4 operations (+, −, ×, ÷), including written methods for integers.
Use index notation.
Use brackets, powers and hierarchy of operations correctly.
Understand the equivalence of fractions, decimals and percentages.
Order positive and negative numbers, including fractions and decimals. Use signs =, ≠, <, >.
Simplify and manipulate algebraic expressions by collecting like terms.



FF02 – Using Number

8. Write a number as a product of its prime factors.
9. Find and use 'highest common factors' and 'lowest common multiples'.
10. Extend application of 4 operations (+, −, ×, ÷), to include fractions and decimals.
11. Use one calculation to find the answer to another.
12. Find fractions, decimals and percentages of quantities.
13. Solve simple linear equations.
14. Substitute values into formulae and expressions.

In pairs, go through the paper, marking down where each of the objectives is essential for being able to access the question.

How many marks are dependent on a solid understanding of FF01 and FF02?

Pearson Edexcel Summer 2025

	5	4	3	2	1
1F	57	47	34	21	9



Because maths matters!

Learners below grade 3

Making progress – 2024/5 achievement data

Students with a Grade 1 at the end of Year 11:

Grade 1	Grade 2	Grade 3	Grade 4
87.7%	10.3%	1.5%	0.4%

Students with a Grade 2 at the end of Year 11:

Grade 1	Grade 2	Grade 3	Grade 4
-	80.8%	15.4%	3.6%

Students with a Grade 3 at the end of Year 11:

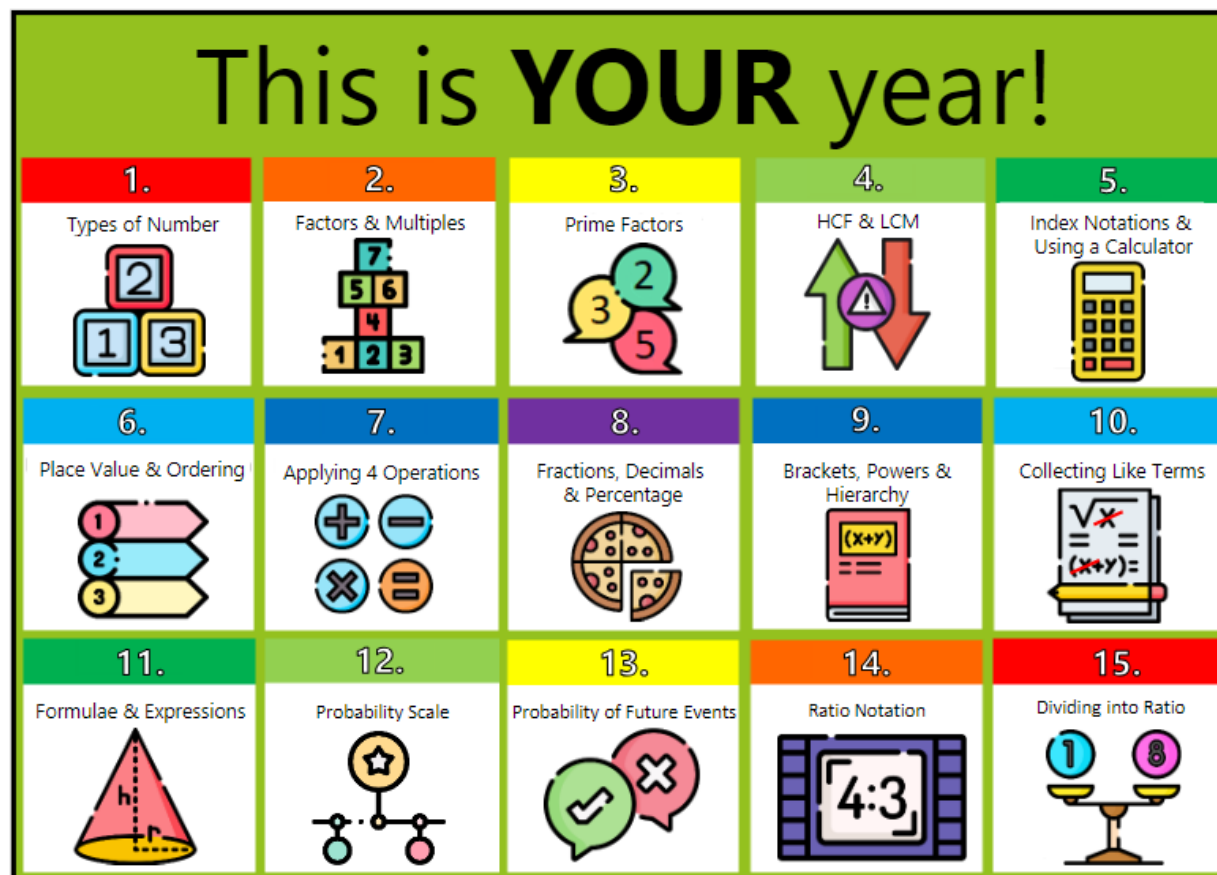
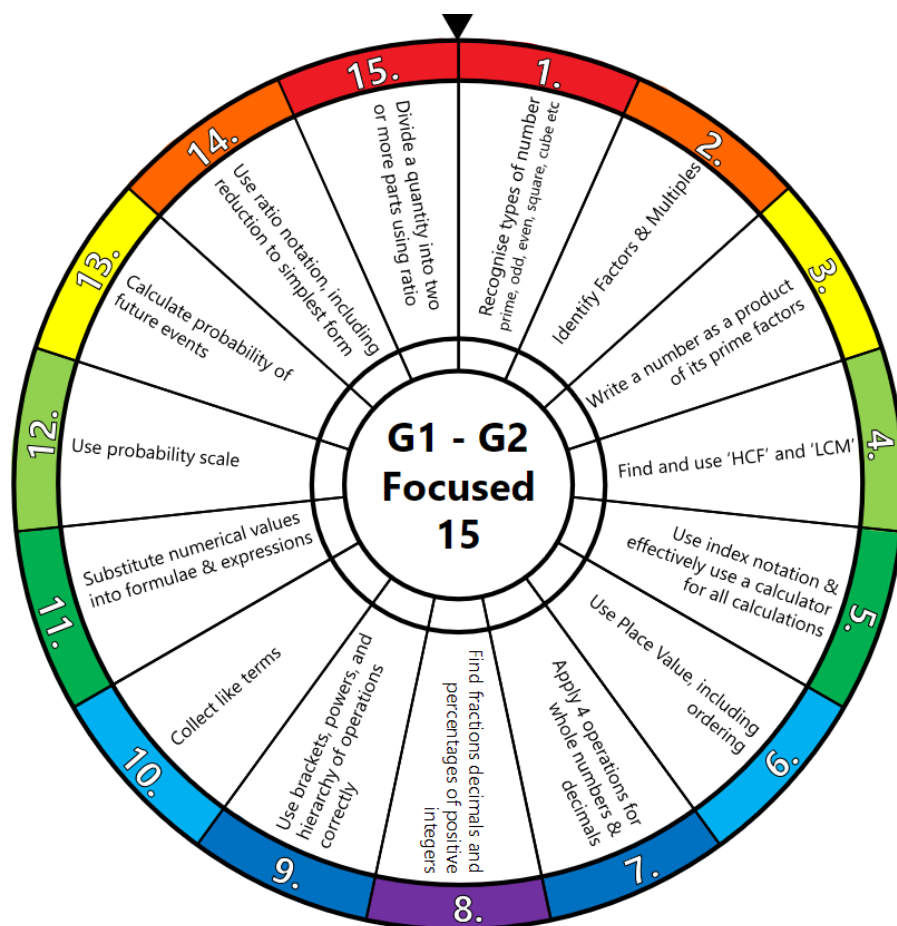
Grade 1	Grade 2	Grade 3	Grade 4
-	-	69.5%	29.3%

'English and maths attainment and grade progress between ages 16 and 19 (includes region, disadvantaged status and SEN)' from 'Level 2 and 3 attainment age 16 to 25', Permanent data table - Explore education statistics - GOV.UK



Students below a Grade 3

Students below a Grade 3



Resources

The Focused 15 Padlet



Any questions?





Because maths matters!



Thank you!

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