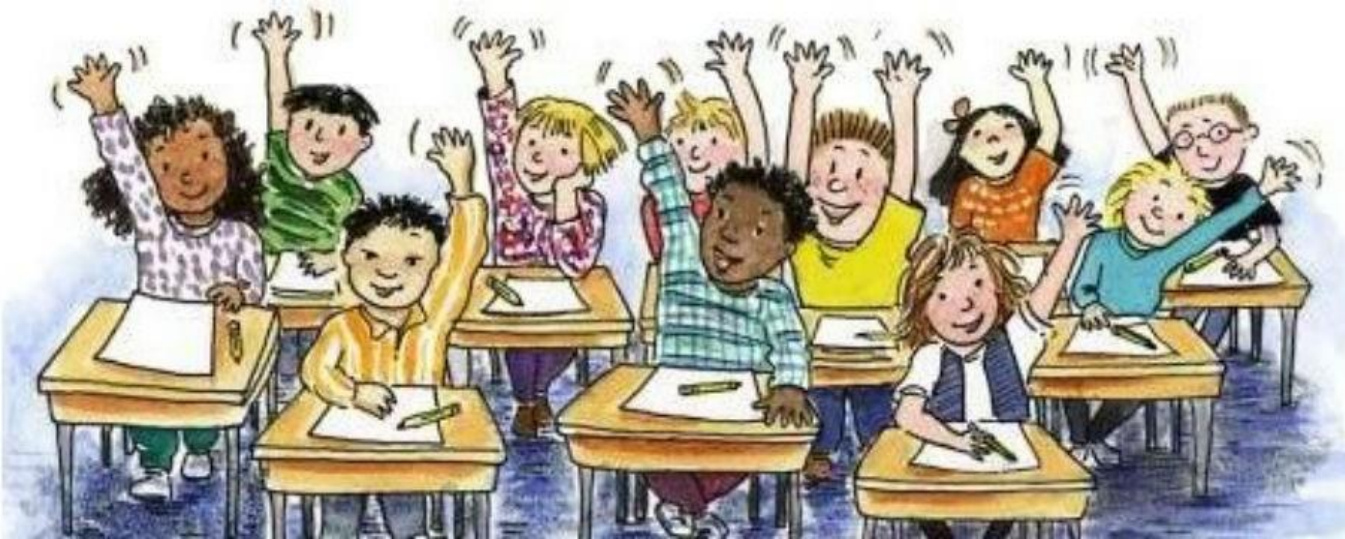


Supporting High Ability Students to Succeed



Foundation Team

- Mr Thomas (AHT Foundation)
- Miss Nimmo (Head of Year 7)
- Mrs Bendall (Head of Year 8)

Maths

Head of Foundation: Mr Stubbs

English

Head of Foundation: Miss Senel-Walp

- Your son/daughter has set themselves challenging target grades in both English and Maths
- This aspiration is excellent and we would like to be able to help you support your child.
- Review of Data Collection Point Data
- Share with you some information and strategies so that we can work together so that your child can continue to succeed as they move out of Foundation and into Key Stage 4.
- Presentation lasts approx. 30 mins
- If you then still require further information?

- Aspirational targets and students need help to meet these:
 - Action Plans
 - Report Cards
 - Teacher Appointments
 - Drop In
 - Intervention Classes
 - Work together with parents



- Context of the new GCSE English and Maths
- Large number of exams
- Remembering more information


New context

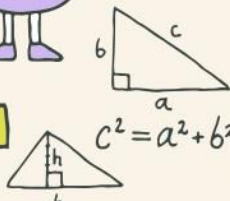



- Every student here is different
- They have already demonstrated good behaviour for learning to achieve the grades they are at present
- Need support in order to move up another grade (let's put this into context of the grading system)
- They are already doing really well, we want to support them to do even better


Everyone is
different

± ≥ ≤ / +
maths
 ! % × = √

CIRCLE

 $C = 2\pi r$
 $A = 2\pi r^2$

TRIANGLE

 $c^2 = a^2 + b^2$
 $A = \frac{1}{2}bh$

SQUARE

 $A = l \times w$

numbers

 $(a^m)^n = a^{mn}$
 $\frac{a^m}{a^n} = a^{m-n}$
 $(a+b)^2 = a^2 + 2ab + b^2$
 $(a-b)^2 = a^2 - 2ab + b^2$

Other elements:
 $a^0 = 1$
 π
 $(ab)^n = a^n b^n$
 $a^m \times a^n = a^{m+n}$
 $s = vt$
 $a^{-n} = \frac{1}{a^n}$
 $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$
 λ
 φ



New GCSE Grades

KS2/3	Old GCSE	New GCSE
	A*	9H
	A*	9M
	A*	9L
	A*	8H
	A1	8M
	A1	8L
	A2	7H
	A2	7M
	A3	7L
	B1	6H
	B1	6M
8b	B2	6L
8c	B3	5H
7a	B3	5M
7b	C1	5L
7c	C2	4H
6a	C3	4M
6b	C3	4L
6c	D1	3H
5a	D2	3M
5b	D3	3L
5c	E1, E2	2H
4a	E3	2M
4b	F1	2L
4c	F2	1H
3a	F3, G1	1H
3b	G2	1M
3c	G3	1L

Examples of data

	Ma Attainment 1 Y7 DCP 1	Ma Effort 1 Y7 DCP 1	Ma Attainment 2 Y7 DCP 2	Ma Effort 2 Y7 DCP 2	Ma Attainment 3 Y7 DCP 3	Ma Effort 3 Y7 DCP 3	Ma Attainment 4 Y7 DCP 4	Ma Effort 4 Y7 DCP 4	Ma Attainment 5 Y7 DCP 5	Ma Progress Diff 5 Y7 DCP 5	Benchmark Progress 5 Y7 DCP 5	Ma Effort 5 Y7 DCP 5	Ma Expected Grade 6 Y7 Summer
Student 1	2M	1	2H	1	2H	1	3L	1					3M
Student 2	2L	1	2L	1	2M	1	2M	1					3L
Student 3	2L	2	2M	2	2M	2	2M	1					3M

	Ma Attainment -End Y7 Y7 Summer	Ma Attainment 1 Y8 DCP 1	Ma Effort 1 Y8 DCP 1	Ma Attainment 2 Y8 DCP 2	Ma Effort 2 Y8 DCP 2	Ma Attainment 3 Y8 Full Report	Ma Effort 3 Y8 Full Report	Ma Attainment 4 Y8 DCP 4	Ma Effort 4 Y8 DCP 4	Ma Attainment 5 Y8 DCP 5	Ma Progress Diff 5 Y8 DCP 5	Benchmark Progress 5 Y8 DCP 5	Ma Effort 5 Y8 DCP 5	Ma Expected Grade 6 Y8 DCP 6
Student 1	3L	3M	2	3M	2	3M	2	3M	2					5L
Student 2	3H	3H	1	3H	1	4L	1	4L	1					5M
Student 3	3M	3M	1	3H	1	4L	2	4L	1					4H

What do levels look like?

Grade 1-2

Addition and Subtraction
Multiplication and Division
Rounding
Estimating
Powers and Roots
Factors and Multiples
Fractions of an Amount
Fractions, Decimals and Percentages
Negative Numbers
BIDMAS
Simplifying Algebra
Angles
Area
Perimeter
Area of a Trapezium
Averages
Frequency Polygons
Stem and Leaf

Grade 3

Fractions
Writing and Simplifying Ratio
Ratio
Writing a Ratio as a Fraction or Linear Function
Proportion
Percentages
Percentage Change
Exchange Rates
Best Buy Questions
Substitution
Solving Equations
Solving Equations with an Unknown on Both Sides
Drawing Graphs
Area and Circumference of Circles

Transformations

Area of Compound Shapes
Probability
Two Way Tables

Grade 4

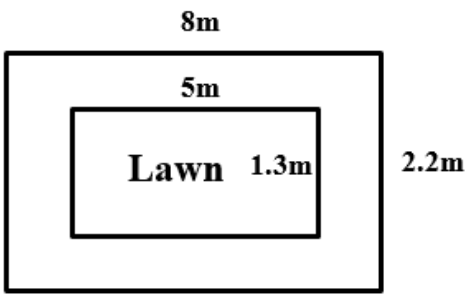
Compound Interest and Depreciation
Indices
HCF and LCM
Functional Maths Questions
Inequalities
Inequalities on Graphs
Forming and Solving Equations
Types of Sequences
Generating Sequences
Sequences (Nth Term)
Expanding and Factorising
Pythagoras
Angle Problems
Angles in Parallel Lines
Angles in Polygons
Surface Area
Volume of Prisms
Cylinders
Loci and Construction
Bearings
Averages from Frequency Tables
Probability
Scatter Graphs

Grade 5

Reverse Percentages
Standard Form
Speed and Density
Changing the Subject of a Formula
Expanding and Factorising Quadratics
Solving Quadratics
Drawing Quadratic Graphs
Drawing Other Graphs: Cubic/Reciprocal
Simultaneous Equations
Solving Simultaneous Equations Graphically
Midpoint of a Line Segment
Gradient of a Line
Equation of a Line
Spheres and Cones
Sector Areas and Arc Lengths
Similar Shapes (Lengths)
SOHCAHTOA
Exact trig values
Congruent Triangles
Probability Trees
Venn Diagrams

Typical test/exam question

The diagram shows a rectangular garden with a path around the edge.



Farhan is going to cover the path with rectangular tiles.
Each tile is 25 cm by 10 cm.
He chooses to tile the path in white, red and black colours.

The ratio of the number of white tiles to the number of red tiles to the number of black tiles will be 5 : 3 : 4.

(a) Assuming there are no gaps between the tiles, how many tiles of each colour will Farhan need?

white tiles
red tiles
black tiles

Answers

$$800 \times 220 = 176000$$

$$500 \times 130 = \underline{65000 \text{ B1}}$$

$$176000 - 65000 = 111000\text{cm}^2$$

$$25 \times 10 = 250\text{cm}^2$$

$$111000 \div 250 = 444 \text{ tiles } \underline{\text{M1}}$$

$$444 \div 12 = 37 \text{ 1 part } \underline{\text{M1}}$$

$$37 \times 5 = 185 \text{ white tiles } \underline{\text{M1}}$$

$$37 \times 3 = 111 \text{ red tiles}$$

$$37 \times 4 = 148 \text{ black tiles}$$

Question 19.

Hannah and Tim both think of a number.

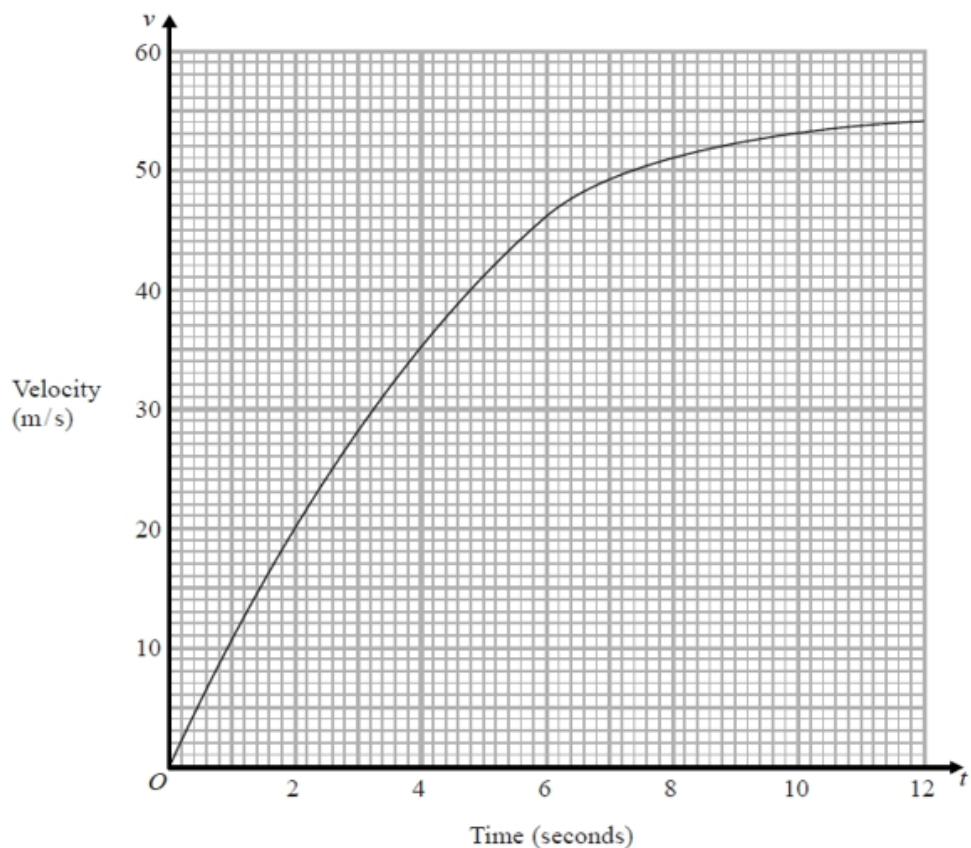
Hannah's number is negative. Tim's number is one more than Hannah's.

They each take the reciprocal of their numbers. The sum of the reciprocals is $\frac{5}{6}$

Use algebra to work out Hannah's original number.

19	<p>Hannah: n Tim: $(n + 1)$</p> <p>So $\frac{1}{n} + \frac{1}{n+1} = \frac{5}{6}$</p> <p>$\frac{n+1+n}{n(n+1)} = \frac{5}{6}$</p> <p>$6(2n + 1) = 5n(n+1)$ $5n^2 - 7n - 6 = 0$ $(5n + 3)(n - 2) = 0$ $n = -\frac{3}{5}$</p>	$n = -\frac{3}{5}$	5	<p>P1 for process to start the problem, e.g. Hannah's number be n and Tim's number $n + 1$.</p> <p>M1 for process to form an equation e.g. $\frac{1}{n} + \frac{1}{n+1} = \frac{5}{6}$</p> <p>M1 for process to simplify down, e.g. $6(2n + 1) = 5n(n + 1)$</p> <p>M1 for quadratic that is then factorised $(5n + 3)(n - 2)$</p> <p>A1 for $-3/5$ oe</p>
----	---	--------------------	---	---

The graph shows information about the velocity, v m/s, of a parachutist t seconds after leaving a plane.



(a) Work out an estimate for the acceleration of the parachutist at $t = 4$

..... m/s²
(2)

(b) Work out an estimate for the distance fallen by the parachutist in the first 12 seconds after leaving the plane.
Use 3 strips of equal width.

By the trapezium rule, distance is

18	(a)	$26 \div 4 = 6.5$	6.5m/s^2	2	C1	for a tangent drawn at $t = 4$
	(b)	splitting area under graph into 3 strips $(0.5 \times 4(0 + 54 + 2(35 + 51)))$ 452m	452m	3	B1	for answer in range 6 to 7
					P1	for splitting the area into 3 strips and a method of finding the area of one shape under the graph, eg, $\frac{1}{2} \times 4 \times 35 (=70)$.
					M1	for complete process to find area under the graph, eg “70” + $\frac{1}{2} \times 4 \times (35 + 51) (=172)$ + $\frac{1}{2} \times 4 \times (51 + 54) (=210)$ [=452]
					A1	for 452

Support
provided

- Every Tuesday after school – Maths drop-in - M2 – 1 hour long
 - Homework
 - Class work
 - Revision
 - Learn new topics

www.mymaths.co.uk

User name: maidenerlegh

Password: pentagon

Helpful Resources



Assessment Manager

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Classic MyMaths

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Number

Algebra

Shape

Data

fSkills

Booster packs

Statistics GCSE

IGCSE

A level

OXFORD

Number

Filter: Everything

Add subtract mental

Add subtract written

Counting and place value

Calculators

Decimals

Estimating and accuracy

Fractions

Money and finance

Multiply divide mental

Multiply divide written

1 Number facts and doubles 1

Knowing pairs that add up to 10. Sums and doubles up to 5.

Lesson



Online homework



2 Number facts and doubles 2

3 Number facts and doubles 3

4 Number facts and doubles 4

1 Number bonds to 20

2 Number bonds

Maths Genie – Exam questions
by topic

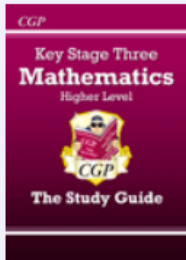
Kesh Takeaway – Video solutions

Corbett Maths – 5 a day

Other useful
websites:

A vertical decorative bar on the right side of the slide, featuring a dark blue background with horizontal stripes in light blue and grey.

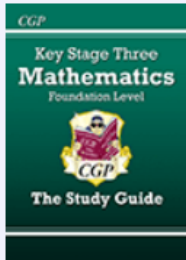
Revision & Study Guides



[KS3 Maths Study Guide - Higher](#) (MHR32)

This fantastic Study Guide explains everything students need to know for Key Stage Three Maths — it's all fully up-to-date for the latest ... [More](#)

[amazonkindle](#) version also available

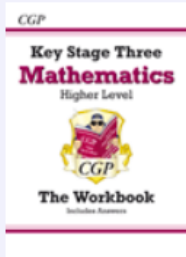


[KS3 Maths Study Guide - Foundation](#) (MFR32)

This Study Guide explains everything students need to know for KS3 Maths — and it's fully up-to-date for the new curriculum from September 2014 onwards. ... [More](#)

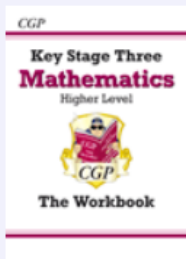
[amazonkindle](#) version also available

Workbooks



[KS3 Maths Workbook \(with answers\) - Higher](#) (MHW32B)

This indispensable Workbook is packed with KS3 Maths practice questions — all fully up-to-date for the new curriculum from September 2014 onwards! (It's ... [More](#)

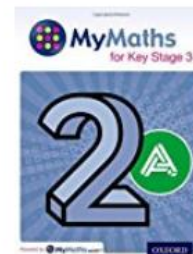
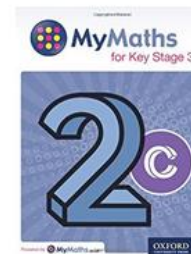
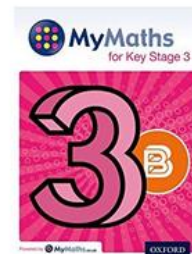
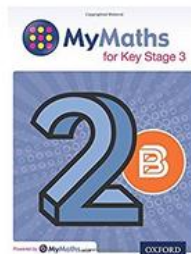
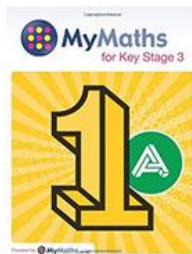
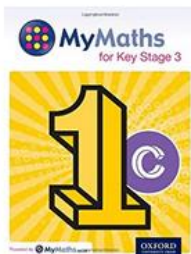


[KS3 Maths Workbook - Higher](#) (MHW32)

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Study guides and Workbooks:

Potential textbooks:





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Pearson/Edexcel Progression Steps

Example of expected progress from Years 7 – 11



Steps Transition 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th



1st & 2nd step = GCSE grade 1

3rd & 4th step = GCSE grade 2

5th & 6th step = GCSE grade 3

7th step = GCSE grade 4

8th step = GCSE grade 5

9th step = GCSE grade 6

10th step = GCSE grade 7

11th step = GCSE grade 8

12th step = GCSE grade 9

	READING	WRITING
7 th step 4	<p>Widening range of reading strategies.</p> <p>Summarises and synthesises a range of key points/</p> <p>Consider layers of inference .</p> <p>Critical responses are supported with some analysis.</p>	<p>Ideas are gathered and sequenced logically and coherently before writing.</p> <p>Broader repertoire of sentence structures are increasingly crafted for effect,</p> <p>Vocabulary is deliberate.</p>
9 th step 6	<p>Evaluates comprehension and reading skills.</p> <p>A range of perceptive connections between a text's key points.</p> <p>Patterns of inference.</p> <p>Increasingly analytical critical responses explore the implications and intention of the writer.</p>	<p>Ideas are selected and structured with some consideration of purpose and intention before writing</p> <p>Paragraphs and sentence structures are manipulated for effect,</p> <p>Broad vocabulary is original.</p>
12 th step 9	<p>Evaluation of reading skills.</p> <p>Astute conclusions.</p> <p>Layers of inference.</p> <p>Independent critical responses, which may explore multiple readings.</p> <p>Confident and perceptive analysis of the writer's whole text and language choices.</p>	<p>Writing is designed to achieve purpose and intention, with significant revisions.</p> <p>Paragraph and sentence structures are crafted.</p> <p>Sophisticated vocabulary.</p>

English Language

- Component 1 – worth 40%
1 h 45 mins
*19th Century Fiction
and Imaginative Writing*
- Component 2 – worth 60%
2h
*Non-Fiction and Transactional
Writing*

100% unseen

English Literature

- Component 1 - worth 50%
1h 45
Shakespeare and Post 1914 Lit
- Component 2 – worth 50%
2h 15
*19th Century novel
Relationships cluster – 15
poems
Comparing unseen poetry*

100% closed book

Unseen 19th Century texts

“I noticed the black vapour hanging like a murky curtain outside the great windows, and I noticed the stifled sound of wheels on the straw or tan that was littered in the street; also, the hum of the people gathered there, which a shrill whistle, or a louder song or hail than the rest, occasionally pierced.”

The Trial for Murder – Charles Dickens

“Worn with pain, and weak from the prolonged hardships which I had undergone, I was removed, with a great train of wounded sufferers, to the base hospital at Peshawar. Here I rallied, and had already improved so far as to be able to walk about the wards, and even to bask a little upon the verandah, when I was struck down by enteric fever, that curse of our Indian possessions.”

A Study in Scarlet – Arthur Conan Doyle

At school - there is no cap on achievement – no tiered entry at GCSE, and differentiation within lessons.

- Revamped curriculum
 - rolling out more challenging texts in Foundation
 - assessments/tasks are extended pieces of writing encompassing comparison skills & evaluation.
- Creative Writing club
- Book club following Carnegie Award

At home – support your son/daughter by ensuring they are reading EVERY day and the key is a range of texts.

- Emphasis on 19th Century texts – both fiction and non-fiction.
- Newspapers
- Modern non-fiction – travel writing, letters, autobiography
- Learning quotations
- Vocabulary
- Writing
- Skills – websites, homework tasks.

Supporting
and
challenging
students

- BBC KS3 Bitesize:

<http://www.bbc.co.uk/education/subjects/z3kw2hv>

- Our suggested reading lists:

<http://www.maidenerleghschool.co.uk/curriculum-and-learning/english-and-media-studies/english-reading-lists/>

Resources which may help you support your child at home

