

# CONYERS SCHOOL



## An introduction to Key Stage 4

*Angela O'Boyle - Director of Standards and Progress*

*[aoboyle@conyers.org.uk](mailto:aoboyle@conyers.org.uk)*

# Aim:

- To provide an overview of the key stage 4 study programme and exams - with specific reference to English and maths
- To indicate ways we support your child and how home and school can work together to ensure your child achieves their potential.

New grading structure	Old GCSE grades
9	A*
8	
7	
6	B
5	
4	
3	D
2	
1	
U	U

<b>GOOD PASS (DFE)</b>
5 and above = top of C and above
<b>AWARDING</b>
4 and above = bottom of C and above

## Changes to the grading system

Only 15% of a child's time is spent at school - so we need your help in getting your child to achieve their potential whatever level that maybe.

A parent has to be an attendance officer, school partner, provider of the tools for homework, banker, chef, laundry maid, study buddy, project manager, sounding board and advisor.



Being a parent is tough  
- we get it!

You have to listen, ensure there is a quiet area for your son or daughter to work, help with organisation and homework, know important dates, give encouragement and rewards .....and not nag!

If you are concerned communicate with us



It is normal to feel some stress / anxiety when sitting a test / exam. We have adapted the curriculum to develop student resilience and self regulation to promote health body and mind.

## **Recognising stress in your child -**

you know your child better than anyone and they may present very differently at home to at school. Parents and school working together is the best way to support your child achieve their potential.



# Physical & Mental health lead - Mr Youll

[Pyoull@conyers.org.uk](mailto:Pyoull@conyers.org.uk)

Twitter

@conyersmhw

Overseeing whole school Physical and mental health

Changes to KS4 PE - highly engaged, physically active students

Varied and fulfilling curriculum

Learning mentors M. Earl and K. McLean (feat. Vinnie) supporting learning

Link between **PD programme** & Focus days (PD fully compliant with statutory RSHE)

**Conyers Connect** - student led mental health initiative



# Year 10 is an important year

- Can't coast Year 10 then cram in Year 11.
- If students fall behind it's very difficult to catch up
- Good work habits need setting from the start.
- The majority of new learning happens in year 10 to allow revision time in year 11

# What can you do to help?

- Establish routines / expectations early on. (pack bag the night before)
- Homework– 1-2 hours per night (check Arbor)
- Recap learning – ask / discussion – you do not need to be an expert! (ask question so student rethink through the lesson - it'll help transfer information from the short term to long term memory)
- Sleep – crucial
- Healthy Balance – social / sport / school
- Jobs – no more than 10 hours per week recommended



# Remember.....

- There were not the distractions there are now, when you were a student. Mobile phones, games consoles, Facebook, Snapchat, Instagram & the internet are part of the student life now.
- But some distractions are the same, TV, social life and ....the lure of potential future partners / peers!

**Let's not pretend we were all saints - we had distractions too.**

# What does our monitoring mean?

Attitudes to Learning 1-4

Student's should aim  
for 1.8 or less

Homework 1-4

**1.8**

Whole school expectations 1-4

Descriptions are on the back of the monitoring report - eg if hw is not completed then it is a 3 - if all hw completed 2 and if hw is exceptional =1. A '4' is indicating a persistent problem - you should have had some contact with a teacher prior

# Important dates for you

- W/C 25th Sept - maths assessment
- W/C 9th Oct - English assessment
- W/c 16th Oct - PE practical exams
- W/C 7th Nov - geography fieldwork
- W/C English unseen poetry assessment
- **21st Nov Tutor evening**
- W/C 11th Dec - English assessment
- W/C 11th Dec PE practical exams
- W/C 8th Jan - maths assessment
- **23rd Jan - consultation evening - RE**
- 5th Feb - CNat and Btec exams week
- W/C 12th Feb - English language assessment
- W/C 12th Feb - PE practical exams

- From 15th Feb - geography trip - Azores
- W/C 25th March - English poetry assessment
- W/C 25th March - PE practical exams
- W/C 15th April - maths assessment
- W/C 22nd April monitoring reports issued
- **W/C 22nd April English GCSE speaking exam**
- **14th May - consultation evening**
- 21st May - PE practical exam
- 24th May - Engineering NEA deadline
- 3rd June - DT & Textiles NEA deadlines
- 17th June - **EXAMS WEEK**
- 28th June Watersports trip
- 1st July - H&SC work experience
- W/C 8th July - English assessment
- 8th July - exam results issued.

# End of year exams in the school hall

**Why?** - This gives students the experience of being in an exam setting with invigilators, seating practices etc.

Feedback from students suggests that this real helps make exams feel normal as by the time get to year 11 the exam environment is no longer a strange experience.

# GCSE RE

Students will sit their GCSE RE exams in Y10.

This gives them the opportunity to experience the preparation for a real exam.

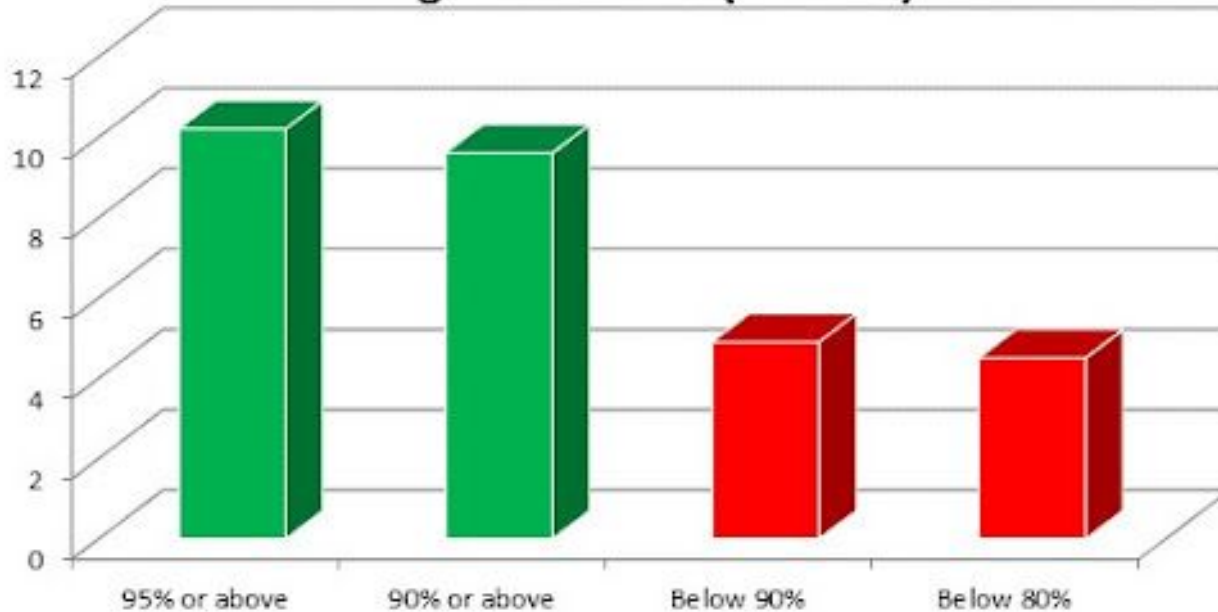
It has proven to be a useful learning curve for many in the past as they move into year 11.

Dates of the RE GCSE: Paper 1 9th May

Paper 2 16th May

National picture - DFE

### Average Number of GCSEs grades 9 to 5 (A\* to C)



This graph shows the strong relationship between good attendance and grades achieved.

To have good attendance - more than 96% present  
95.9%-90% is classed as poor attendance

Below 90% is classed as persistently absent

# If students are absent...

- They need to **catch up** what they missed.  
Lesson resources are on google drive / showbie
- They need to **understand** what they have missed

**Learning Gaps are the enemy of success:**

- **most learning is sequential**
- **impacts on self-confidence**

# If you are concerned please contact the school:

- Mrs Croft ( CIAG advisor) [jcroft@conyers.org.uk](mailto:jcroft@conyers.org.uk)
- sdyball[@conyers.org.uk](mailto:sdyball@conyers.org.uk)
- Tutor
- Subject teacher / Head of Subject
- Mrs O'Boyle [aoboyle@conyers.org.uk](mailto:aoboyle@conyers.org.uk)
- Mrs McLean [kmclean@conyers.org.uk](mailto:kmclean@conyers.org.uk)





# English GCSE

Head of English - Dr Lodge [rlodge@conyers.org.uk](mailto:rlodge@conyers.org.uk)

# GCSE English

- . Two courses – English Language; English Literature.
- . Two separate grades
- . Plus an award for spoken English: pass, merit, distinction

## What We Do – What We Have Always Done

- Read books and passages
- Respond in essays and shorter forms
- Write non-fiction and descriptive pieces
- Assessed on imagination and accuracy
- Assessed for spoken English

# What's Changed in Recent Years?

- Only one set of exams – no tiered papers
- No coursework or controlled assessment
- Four exams at the end of Year 11
- Speaking mark is separate and does not go towards the Language grade
- Grades have been replaced by numbers

## Two qualifications:

- English Language

1. Read fiction passages and write fiction pieces
2. Read non-fiction passages and write non-fiction pieces

- English Literature

1. Read Shakespeare and 19<sup>th</sup> Century Novel
2. Read novel or play and poems

# Literature Texts

- Romeo and Juliet
- A Christmas Carol
- An Inspector Calls
- Selection of poems on power and conflict

# Course Order

- Writing Skills
- Unseen Poetry
- A Christmas Carol
- Anthology Poems
- Paper 1 Fiction
- Paper 2 Non-fiction
- An Inspector Calls
- Romeo and Juliet
- Revision, revisiting, improving reading and writing skills

# Course Content

- Each unit features two assessment points
- Preparation assessment
- 1 final assessment
- Data gathered from each final assessment
- These grades will inform marks sent home with whole school monitoring



# Support

## Google Drive

- We have a very wide range of resources on here
- Lots of past exams
- Lots of revision booklets
- Resources for every unit

## Showbie

- Individual teachers will put their lesson powerpoints and resources on here

# What Can I Do?

- Ask your child about their homework – likely to get something from English every week
- Guide student to use resources to check and learn key learning points

# Questions?

- If you have specific questions about your child, please contact their teacher in the first instance

First point of contact is always: class teacher –

[ateachername@conyers.org.uk](mailto:ateachername@conyers.org.uk)

- My email: [rlodge@conyers.org.uk](mailto:rlodge@conyers.org.uk)

# Maths GCSE

Head of Maths- Mr Anderson  
kanderson@conyers.org.uk

# GCSE Maths

## Year 11 maths exam info:

- Edexcel exam board
- At the end of Year 11 students will sit 3 papers
- Each paper lasts 1 hour 30 minutes
- Paper 1: Non calculator
- Paper 2 : Calculator
- Paper 3: Calculator

## Y10 assessments in maths:

- Assessment 1 – W/C 25th September
- Assessment 2 – W/C 8th January
- Assessment 3 - W/C 15th April
- EOY (Mock Exams) – Commencing 17<sup>th</sup> June

# Groups

Sets 1-4: Higher

Group 5 is a grade 5 foundation class

Groups 6-9: mixed ability foundation (aim for a 5)

Set 10: alternative qualifications and GCSE

# Revision

As preparation for all assessments, students are set a Mathswatch assignment.

Students can also complete their own revision.

Complete exercises, work on showbie or use a revision guide.

# Schemes of work – shared on showbie



## Mathematics Scheme of Work: Year 10

Unit			Hours
Half Term 1 (7.2 weeks)		Monday 04.09.23 – Friday 27.10.23	
1	Numbers and the number system	Consideration of the importance and usefulness of prime numbers when investigating the properties of number moving onto surds for Higher tier	6
2	Measuring space	Consolidate measuring skills and develop understanding and confidence in converting between various different forms of measurement	4/2
3	Investigating properties of shapes	All things right angled triangles. A reminder of Pythagoras' Theorem (2D and 3D), investigation of similar triangles and a look at trigonometry	6/3
Assessment and Intervention		Assessment 1 (Units 1 to 3) – Date: w/c 25 <sup>th</sup> September	3
4	Checking, approximating and estimating	A key topic. The ability to round to any given accuracy and the use of rounding for sensible approximations is essential here	3
5	Calculating fractions, decimals and percentages	Arithmetic involving fractions and the ability to solve an array of percentages problems is to be consolidated	6
Half Term 2 (6.4 weeks)		Monday 06.11.23 – Tuesday 19.12.23	
6	Algebraic proficiency: tinkering	Enhance algebra manipulation skills - particularly factorising before considering its usefulness when working with algebraic fractions. Indices rules	13
7	Calculating	Calculation and estimation skills, before picking up standard form and calculating using very big/small numbers. Consider bounds also	4
8	Algebraic proficiency: visualising	A reminder of straight line graphs from KS3 before transformations and simultaneous equations. Different forms of lines to be discussed	3
9	Mathematical movement	Investigating the transformations of translation, rotation, reflection and enlargement of 2D shapes. Reference to algebra is a necessity	6
Half Term 3 (6.6 weeks)		Wednesday 03.01.24 – Friday 16.02.24	
*****NOTE: UKMT Maths Challenge for Year 10 is on 31 <sup>st</sup> January – Set 1 need to be prepared (please see KA for details) *****			
Assessment and Intervention		Assessment 2 (Units 1 to 9) – Date: w/c 8 <sup>th</sup> January	3
10	Solving equations and inequalities	Ensure competency with the balance method to solve equations. Find approximate solutions to complex equations and solving simultaneous equations	8
11	Analysing statistics	Recap previous statistical techniques before a consideration of sampling. Construct and interpret cumulative frequency graphs and box plots	10
12	Proportional reasoning	Direct and inverse proportion before considering similarity and density problems set up requiring the use of multiplicative reasoning techniques to solve	9
Half Term 4 (4.8 weeks)		Monday 26.02.24 – Thursday 28.03.24	
13	Calculating space	A return to the circle. Area and perimeter problems including the use of exact multiples of $\pi$ whilst also working on more complex written problems	4
14	Pattern searching	An in-depth review of patterns and sequences of numbers before considering new 'special', geometric and quadratic sequences to extend understanding	5
15	Understanding risk	Basic probability was covered in KS3. This unit explores independent and dependent events through various diagrammatic forms	7
Half Term 5 (5.8 weeks)		Monday 15.04.24 – Friday 24.05.24	
Assessment and Intervention		Assessment 3 (Units 1 to 15) – Date: w/c 15 <sup>th</sup> April	3
16	Solving equations and inequalities	Learning to solve inequalities; representing them on number lines and shading appropriate regions on graphs before looking at the use of set notation	5
17	Calculating space	Extension of previous mensuration work to consider area and volume problems regarding more complex shapes such as spheres and cones	8
18	Exploring fractions, decimals and percentages	Recapping and extending work covered in Unit 2. Introduction of recurring decimals and more complex percentage problems including growth and decay	4
Half Term 6 (7 weeks)		Monday 03.06.24 – Friday 19.07.24	
19	Investigating angles and conjecturing	Consolidation and application of KS3 angle skills leading in to work on proof involving triangles and circle theorems. Push concise reasoning statements	8
20	Algebraic proficiency: visualising	A thorough and in-depth investigation into the features of straight line graphs before looking at the equation of a circle; solving related problems	8
Assessment and Intervention		Mock Exams – Date: Fortnight commencing Monday 17 <sup>th</sup> June	6
21	Solving equations and inequalities	Building on units 10 and 16 – students now solve quadratic equations; looking at key points on graphs and connecting them to the corresponding equation	5



<b>Key concepts</b> <ul style="list-style-type: none"> <li>use the concepts and vocabulary of prime numbers, highest common factor, lowest common multiple, prime factorisation, including using product notation and the unique factorisation theorem, simplify surd expressions involving squares (e.g. <math>\sqrt{12} = \sqrt{4 \times 3} = \sqrt{4} \times \sqrt{3} = 2\sqrt{3}</math>)</li> </ul>	<b>The Big Picture: GCSE Grade Guidelines</b>
---	---

[Return to overview](#)

Prerequisites	Possible success criteria	
<ul style="list-style-type: none"><li>calculations involving + - × ÷</li><li>BIDMAS calculations</li><li>Find factors and multiples of numbers</li><li>Know the meaning of a prime number</li><li>Recall prime numbers up to 50</li><li>Know how to test for divisibility using mental and written methods</li></ul>	Foundation	<ul style="list-style-type: none"><li>Write a number as a product of its prime factors</li><li>Use a Venn diagram to sort information</li><li>Solve worded problems using HCF and LCM</li><li>Use prime factorisations to find the highest common factor of two numbers</li><li>Use prime factorisations to find the lowest common multiple of two numbers</li></ul>
	Higher	<ul style="list-style-type: none"><li>As above, plus...</li><li>Know that <math>\sqrt{a \times b} = \sqrt{a} \times \sqrt{b}</math></li><li>Identify a factor pair where one factor is square</li><li>Use <math>\sqrt{a \times b} = \sqrt{a} \times \sqrt{b}</math> to simplify a surd</li><li>Multiply two binomials involving surds</li><li>Rationalise denominator can be looked at (ready for exact trig values in unit 3) but will not be assessed</li></ul>
Possible misconceptions	Mathematical language	Pedagogical notes
<ul style="list-style-type: none"><li>Many pupils believe that 1 is a prime number – a misconception which can arise if the definition is taken as ‘a number which is divisible by itself and 1’</li><li>Some students may think that <math>\sqrt{a \pm b} = \sqrt{a} \pm \sqrt{b}</math></li><li>Some students may think that <math>(\sqrt{a} + \sqrt{b})^2 = a + b</math></li><li>Some students may write <math>\sqrt{4 \times 3}</math> when they should write <math>\sqrt{4 \times 3}</math> (or <math>\sqrt{4 \times 3}</math>)</li></ul>	<p>Prime</p> <p>Prime factor</p> <p>Prime factorisation</p> <p>Product</p> <p>Venn diagram</p> <p>Highest common factor</p> <p>Lowest common multiple</p> <p>Power, Root</p> <p>Index, Indices</p> <p>Surd</p> <p>Simplify</p> <p>Notation</p> <p>Index notation: e.g. <math>5^3</math> is read as ‘5 to the power of 3’ and means ‘3 lots of 5 multiplied together’</p> <p><math>\sqrt{a}</math> represents the ‘positive square root of’, and the bar should be used to enclose contents correctly</p>	<p>NRICH: <a href="#">Divisibility testing</a></p> <p>NCETM: <a href="#">Glossary</a></p> <p>Common approaches</p> <p><i>The following definition of a prime number should be used in order to minimise confusion about 1: A prime number is a number with exactly two factors.</i></p> <p>Surd is derived from the Latin ‘surdus’ (‘deaf’ or ‘mute’). A surd is therefore a number that cannot be expressed (‘spoken’) as a rational number. Students should already have established the following facts:</p> <p><math>\sqrt{a \pm b} \neq \sqrt{a} \pm \sqrt{b}</math>, <math>\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}</math> and <math>\sqrt{a \times b} = \sqrt{a} \times \sqrt{b}</math></p> <p>NCETM: <a href="#">Departmental workshops: Surds</a></p> <p>NCETM: <a href="#">Glossary</a></p>
Suggested Materials		
Online and iPad	Lesson Plans, Worksheets and Activities	Textbook References, Thinking Skills and Reviews
<p>NRICH: <a href="#">Product Sudoku</a></p> <p>Median: <a href="#">Cancelling Down</a></p> <p>Median: <a href="#">Serendipity</a></p> <p>MEP: <a href="#">Prime Numbers and Factors</a></p> <p>MEP: <a href="#">Prime Factorisation</a></p> <p>IXL: <a href="#">Divisibility Rules</a></p> <p>IXL: <a href="#">HCF and LCM Word Problems</a></p> <p>NRICH: <a href="#">Surds</a></p> <p>IXL: <a href="#">Surds with fractions</a></p>	<p>Transum: <a href="#">Number Types Venn Diagram</a></p> <p>Transum: <a href="#">Factor trees</a></p> <p>Transum: <a href="#">HCF and LCM</a></p> <p>KM: <a href="#">Powers of ten</a></p> <p>NZ Maths: <a href="#">Five Number Game</a></p> <p>Hwb: <a href="#">Q3 Manipulating surds</a></p> <p>Standards Unit: <a href="#">N1.1 Manipulating surds</a></p>	<p>Elmwood (1-3): Pg 29-34, Pg 259-262</p> <p>Elmwood (4-5): Pg 10-12, Pg 116, Pg 206-210</p> <p>Elmwood (4-9): Pg 126-128, Pg 243-247</p> <p>Learning review</p> <p>GLOWMaths/JustMaths: <a href="#">Sample Questions Both Tiers</a></p> <p>GLOWMaths/JustMaths: <a href="#">Sample Questions Higher Tiers</a></p> <p>Elmwood (4-5): Pg 61-69, Pg 115, Pg 118-119</p> <p>Elmwood (4-9): Pg 11-17</p> <p>Learning review</p> <p>GLOWMaths/JustMaths: <a href="#">Sample Questions Higher Tiers</a></p>

# What equipment do students need for Maths?

Which calculator should I buy?

We recommend the Casio FX-83GT X or the FX-85GT CW calculator which cost £10-£12 from most major supermarkets and are also available from the school library (via parentpay) for £10



- In addition to the standard school equipment (Ipad, pen, pencil, ruler, eraser) students must also bring and a scientific calculator to every Maths lesson. Students should have a pair of compasses, a 180° protractor - told in advance when to bring these.

# Which resources are available if students need help?

- Students will be asked to write notes and examples in their exercise books and students should always look back at their previous work to see if this helps them if they are struggling.
- Teachers may upload examples and additional support materials into Showbie
- MathswatchVLE is an excellent resource which contains video tutorials and self marking exercises for all aspects of Maths at KS3 and KS4. Each student has a login to this system. Teachers can assign work in here and monitor progress. This can help identify students who need additional support.

# Which resources are available if students need help?

**Mathspad** – another interactive teaching resource with assignments and used in lots of Maths lessons.

There are numerous other websites that provide excellent revision and practice resources for students. Many of these are self-marking or have mark schemes provided. These include **MrCartermaths**, **transum**, **CorbettMaths**, **Mathsgenie** and **BBC Bitesize**.

**Teachers** are always available in block 6 during social time to help students if required.

# Login details

Teachers will give students their login details for the following websites.

They will also be on showbie

# Mathswatch

<https://vle.mathswatch.co.uk/vle/>

Username:



Login

Username

16kanderson@conyers

Password

.....

Login With Wonde

View Demo

Login

# Mathspad

Individual logins given by teachers and shared on showbie



Welcome To  
**MathsPad**

Search Resources...

Hello 

You are logged in as Mr  
K Anderson at Conyers  
School.

Logout

*Interactive Student Tasks* *Starters* *Worksheets & Lesson Plans* *New* *My Classes*

## ★ Number

Place Value &  
Decimals

Calculations

Factors, Multiples &  
Primes

Negative Numbers

Rounding &  
Estimation

## Place Value & Decimals Tasks

▼ Reading, writing and ordering numbers		
Writing Numbers up to 9,999	New Video	Convert numbers from words to digits
Writing Numbers Up to 999,999	New Video	Convert numbers from words to digits
Writing numbers up to the millions	New Video	Convert numbers from words to digits
Large numbers - words & figures		Write large numbers in words and figures
Large numbers - ordering		Compare and order large numbers in words and figures
Reading & writing decimals		Use decimal place values (eg. tenths, hundredths)

# What homework is issued in Maths?

- . Homework is issued weekly by the class teacher.
- . A 'Weekly Skills' sheet containing 20 questions is issued, some topic based questions are also set for students to complete. These will be completed electronically on [DrFrostmaths.com](http://DrFrostmaths.com)
- 
- . The 'Weekly Skills' sheet is supported by 'Weekly Skills' classroom tasks in which the homework skills can be practiced and developed.
- . Topic based homework – every unit (2 weeks) students may also receive a topic based task, either the current topic or a revision topic
- . Teachers may begin to give practice GCSE papers



Save Options ▾

View Edit

More Options

## Question 1

Skill: K68a Angles in a... ▾

## Question 2

Skill: K115a Find the H... ▾

## Question 3

Skill: K16a Calculate p... ▾

## Question 4

Skill: K103a Evaluate c... ▾

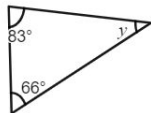
## Question 5

Skill: K80a Add algebra... ▾

## Question 6

Skill: K97a Write an im... ▾

## Question 1 1 2 3 4 ↺

Find the value of  $y$ . $y =$    $^\circ$ 

## Question 2 1 2 3 4 ↺

Find the Highest Common Factor (HCF) of 36 and 32.

## Question 3 1 2 3 4 ↺

Calculate

$3^3$

## Question 4 1 2 3 4 ↺

Calculate

$5 - 7^2$

## Question 5 1 2 3 4 ↺

Simplify

$7z + 4z + 7z$

## Question 6 1 2 3 4 ↺

Write

$$\frac{9}{2}$$

as a mixed number.

  $\frac{\text{}{\text{}}$ 

## Question 7 1 2 3 4 ↺

Round 0.9457 to 1 decimal place.

## Question 8 1 2 3 4 ↺

Work out  $\frac{36}{z} + 9$  when  $z = 9$

Name :

HA2.1

<b>Question 1</b> Expand and simplify $(x - 4)(x + 6)$	<b>Question 2</b> Expand and simplify $(5x - 3)(3x - 2)$	<b>Question 3</b> Factorise $15x + 10$	<b>Question 4</b> Factorise fully $7x + 35x^2$
<b>Question 5</b> Factorise $x^2 + 11x + 30$	<b>Question 6</b> Factorise $x^2 + 3x - 4$	<b>Question 7</b> Make x the subject of the formula $y = ax + b$	<b>Question 8</b> Make x the subject of the formula $y = b - ax$
<b>Question 9</b> Work out $7 \div 0.1 =$	<b>Question 10</b> Work out $9.6 \div 0.6 =$	<b>Question 11</b> Work out $3\frac{2}{5} \times 2\frac{2}{3}$	<b>Question 12</b> Work out $1\frac{5}{6} \times \frac{1}{2}$
<b>Question 13</b> Divide £7000 in the ratio 3 : 7	<b>Question 14</b> Divide £2400 in the ratio 5 : 7	<b>Question 15</b> Work out the value of $3x + 7y$ when $x = -2$ and $y = -5$	<b>Question 16</b> Work out the value of $x^2 + y$ when $x = -1$ and $y = 6$
<b>Question 17</b> Find the median 7, 7, 5, 19, 10	<b>Question 18</b> Find the median 1.8, 2.3, 2.3, 2.2, 1.7, 1	<b>Question 19</b> Solve $\frac{x}{3} - 2 = 2x - 17$	<b>Question 20</b> Solve $4(5x - 4) = -56$

**SKILLS CHECK**

Score

# Past papers

Can complete some independently in Year 10

Schedule in Year 11

# Always something to do

Mathswatch

Complete work on showbie

Revision guide

# Who should parents/guardians contact with further questions?

- Please email either [kanderson@conyers.org.uk](mailto:kanderson@conyers.org.uk) or your child's Maths teacher if you have any further queries or require any clarifications.