



# Teach Us Ma+hs

[www.teachusmaths.com](http://www.teachusmaths.com)  
Email: [hello@teachusmaths.com](mailto:hello@teachusmaths.com)

My name is Amy and I have been a qualified Maths Teacher since 2005.

I have vast teaching experience, having taught in a variety of Secondary Schools, as well as online for an Alternative Provision.

I am also an examiner and a mum!

- Here at Teach Us Maths, we believe that every student should have access to quality education.
- We also understand that not everyone can find/afford a Maths tutor to help them in this journey.
- That is why I am offering **FREE Live Maths Lessons** each with a useful **handout**.
- If you find the lessons helpful, and you are willing/able, you can send me a [donation](#).
- Alternatively, for just £6/month with no contract, you can subscribe to my website. Here you will find additional resources, namely a **worksheet** and **slideshow** that accompany the Live Lesson. You will also gain access to all the other available **topics**, each with a pre-recorded **video**!



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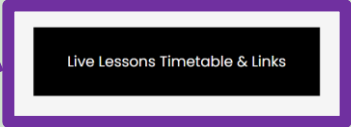
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## Option 1

### FREE / donation

Go to [www.teachusmaths.com](http://www.teachusmaths.com)

On the homepage look for the button labelled  
'Live Lessons Timetable & Links'



Here you will find:

- the timetable of lessons (and who they are most suited to)
  - the link to the live lesson
  - the relevant printable handout

You will also be able to access the 'live lesson' recording, plus all the pre-recorded lessons, on my [YouTube channel](#).

I can only offer live lessons thanks to the generous donations from my audience.

If you are finding the lessons useful, please consider donating. This could be a one-off payment of an amount of your own choosing, or a monthly payment.

Thank you!

[DONATE](#)

## Option 2

### £6/month (no contract)

Go to [www.teachusmaths.com](http://www.teachusmaths.com)

On the homepage look for the button labelled  
'Live Lessons Timetable & Links'

Here you will find:

- the timetable of lessons (and who they are most suited to)
  - the link to the live lesson
  - the relevant printable handout
  - the link to the accompanying worksheet
  - the link to the accompanying slideshow

MAKE SURE THAT YOU ARE SUBSCRIBED AND LOGGED IN TO [WWW.TEACHUSMATHS.COM](http://WWW.TEACHUSMATHS.COM) BEFORE CLICKING ON THESE 2 LINKS

You will also be able to access the 'live lesson' recording, plus all the pre-recorded lessons, on my [YouTube channel](#).

Anyone choosing Option 2 will also gain access to ALL topics.

Each topic includes:

- a slideshow 'Lesson'
- an accompanying 'Worksheet'
- and a detailed pre-recorded 'Video'.



Join my facebook group [FREE Maths Lessons UK - Teach Us Maths](#) to stay up to date!

These lessons will cover a variety of core Mathematics topics and are best suited to people following the National Curriculum for England.

GREEN topics are of approximate GCSE grades 1 – 3 BLUE topics are of approximate GCSE grades 4 & 5 PURPLE topics are of approximate GCSE grades 7 - 9

\* Please note that I reserve the right to cancel any live lesson if I deem it necessary. \* Please also note that all lessons are recorded for safeguarding reasons. \*

	5pm	6pm	7pm
Thursday 20 <sup>th</sup> March	N 2.1 Adding & Subtracting Negative Numbers	G 10.1 Pythagoras' Theorem	G 12.1 Circle Theorems
Thursday 27 <sup>th</sup> March	N 3.4 Multiplying Decimals	G 10.2 Trigonometry - Introduction	G 10.5 Sine Rule
Thursday 3 <sup>rd</sup> April	N 4.1 Equivalent Fractions	N 4.4 Adding & Subtracting Fractions	G 10.6 Cosine Rule
EASTER HOLIDAYS			
Thursday 24 <sup>th</sup> April	N 6.2 Percentages of an Amount (Non-Calculator)	N 6.7 Compound Interest	N 7.7 Calculating with Upper & Lower Bounds
Thursday 1 <sup>st</sup> May	N 5.1 Converting between Fractions, Decimals & Percentages	N 9.1 Standard Form	N 5.3 Recurring Decimals
Thursday 8 <sup>th</sup> May	R 1.2 Simplifying Ratio	R 1.3 Sharing in a Ratio	N 10.1 Surds
Thursday 15 <sup>th</sup> May	A 3.2 Collecting Like Terms	A 3.7 Laws of Indices (Algebra)	N 8.3 Fractional Indices
Thursday 22 <sup>nd</sup> May	A 3.5 Expanding Single Brackets	A 3.6 Factorising into Single Brackets	R 2.3 Direct Proportion (Algebra)
HALF TERM HOLIDAYS			
Thursday 5 <sup>th</sup> June	A 3.10 Solving Linear Equations	A 4.1 Expanding Double Brackets	R 2.4 Inverse Proportion (Algebra)
Thursday 12 <sup>th</sup> June	G 5.2 Converting Metric Units	A 4.2 Factorising Quadratics	A 4.12 Solving Quadratics – All Methods
Thursday 19 <sup>th</sup> June	G 3.1 Circumference	A 9.1 Simultaneous Equations - Linear	A 7.4 Solving Quadratic Inequalities
Thursday 26 <sup>th</sup> June	G 3.3 Area of Circles	A 10.1 Linear Sequences	A 10.2 Quadratic Sequences
Thursday 3 <sup>rd</sup> July	S 2.1 Mean, Median, Mode, Range	S 2.2 Averages from a Table	A 8.2 Iteration
Thursday 10 <sup>th</sup> July	P 1.1 Basic Probability	P 2.2 Tree Diagrams	A 12.1 Functions
Thursday 17 <sup>th</sup> July	A 2.2 Plotting Linear Graphs (y = mx + c)	P 2.3 Venn Diagrams	A 13.1 Algebraic Proof
SUMMER HOLIDAYS			

# LIVE LESSONS

Topic:	R 1.2 Simplifying Ratio	R 1.3 Sharing in a Ratio	N 10.1 Surds
Date:	Thursday 8 <sup>th</sup> May	Thursday 8 <sup>th</sup> May	Thursday 8 <sup>th</sup> May
Time:	5pm	6pm	7pm
Most suitable For:	Key Stage 3 Functional Skills L1/L2 GCSE Foundation	Key Stage 3 Functional Skills L1/L2 GCSE Foundation GCSE Higher	GCSE Higher
Link to Live Lesson:	<a href="#">Live Lesson</a>	<a href="#">Live Lesson</a>	<a href="#">Live Lesson</a>
Link to Handout:	<a href="#">Handout</a>	<a href="#">Handout</a>	<a href="#">Handout</a>
<p>*Please note that due to safeguarding reasons, comments during the lessons will be disabled. If time allows, I will answer some of the questions that have been submitted to me via my email during the lessons.</p> <p>To submit a question:</p>	Email me: <a href="mailto:hello@teachusmaths.com">hello@teachusmaths.com</a>	Email me: <a href="mailto:hello@teachusmaths.com">hello@teachusmaths.com</a>	Email me: <a href="mailto:hello@teachusmaths.com">hello@teachusmaths.com</a>

If you have a **subscription** (£6/month no contract) to [www.teachusmaths.com](http://www.teachusmaths.com) you can also access:

Accompanying Worksheet	<a href="#">Worksheet</a>	<a href="#">Worksheet</a>	<a href="#">Worksheet</a>
Slideshow Lesson	<a href="#">Slideshow Lesson</a>	<a href="#">Slideshow Lesson</a>	<a href="#">Slideshow Lesson</a>

Don't forget that if you miss a lesson, you can find the recorded live lesson, plus pre-recorded lessons, FREE on my [YouTube channel](#)

Finding the lessons useful? Please consider 'buying me a coffee'. Thank you!



[DONATE](#)



# Simplifying Ratio

1) Simplify:

(a)  $2 : 8$

(b)  $21 : 15$

(c)  $18 : 24$

(d)  $4 : 6 : 10$

(e)  $400g \text{ to } 3kg$

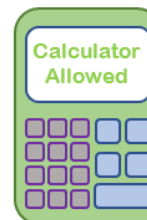
2) Express  $2 : 7$  in the form  $1:n$

3) Express  $3 : 5$  in the form  $n:1$

4) There are 8000 people at a concert. 6400 of them are adults, the rest are children.

What is the ratio of children to adults?

Give your answer as a ratio in its simplest form.



# Sharing in a Ratio

- 1) Share 12 in the ratio 1 : 2
- 2) Share 27 in the ratio 5 : 4
- 3) Share £4 in the ratio 2 : 3
- 4) Share 8 in the ratio 7 : 5
- 5) William, Katie, and Stacy are sharing 36 sweets in the ratio 1 : 3 : 5.
  - (a) How many sweets does William get?
  - (b) How many more sweets does Stacy get than Katie?

# Surds

1) Simplify:

(a)  $\sqrt{80}$

(b)  $5\sqrt{18}$

2) By simplifying each surd first, work out the following:

(a)  $\sqrt{12} + \sqrt{27}$

(b)  $3\sqrt{50} - 5\sqrt{8}$

3) Work out the following, simplifying each answer where possible:

(a)  $\sqrt{3} \times \sqrt{5}$

(b)  $(\sqrt{4})^2$

(c)  $\sqrt{8} \times \sqrt{4}$

(d)  $4\sqrt{15} \times 2\sqrt{10}$

(e)  $10\sqrt{60} \div 2\sqrt{3}$

