

# Welcome - Do now!

edexcel

## Edexcel GCSE (9-1) Maths: need-to-know formulae

[www.edexcel.com/gcsemathsformulae](http://www.edexcel.com/gcsemathsformulae)

**Areas**

Rectangle = $l \times w$	
Parallelogram = $b \times h$	
Triangle = $\frac{1}{2} b \times h$	
Trapezium = $\frac{1}{2} (a + b) h$	

**Circles**

Circumference = $\pi \times \text{diameter}$ , $C = \pi d$	
Circumference = $2 \times \pi \times \text{radius}$ , $C = 2\pi r$	
Area of a circle = $\pi \times \text{radius squared}$ , $A = \pi r^2$	

**Pythagoras**

Pythagoras' Theorem  
For a right-angled triangle,  
 $a^2 + b^2 = c^2$

Trigonometric ratios (new to P)  
 $\sin x^\circ = \frac{\text{opp}}{\text{hyp}}$ ,  $\cos x^\circ = \frac{\text{adj}}{\text{hyp}}$ ,  $\tan x^\circ = \frac{\text{opp}}{\text{adj}}$

**Quadratic equations**

The Quadratic Equation  
The solutions of  $ax^2 + bx + c = 0$ ,  
where  $a \neq 0$ , are given by  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

**Volumes**

Cuboid = $l \times w \times h$	
Prism = area of cross section $\times$ length	
Cylinder = $\pi r^2 h$	
Volume of pyramid = $\frac{1}{3} \times \text{area of base} \times h$	

**Compound measures**

Speed $\text{speed} = \frac{\text{distance}}{\text{time}}$	
Density $\text{density} = \frac{\text{mass}}{\text{volume}}$	
Pressure The formula for pressure does not need to be learnt, and will be given within the relevant examination questions.	

**Trigonometric formulae**

Sine Rule  $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Cosine Rule  $a^2 = b^2 + c^2 - 2bc \cos A$

Area of triangle =  $\frac{1}{2} ab \sin C$

Foundation tier formulae Higher tier formulae

The dark blue boxes show the formulae that EVERY student at school must LEARN.

Spend some time looking through to see if you can remember which of these formulae have already been covered in year 9

# How can IT support learning?

Also known as....

Computer Assisted Learning

E learning

Online Learning

An overview of some of the resources that students have available to them

# Chromebooks for all - every student has online access in every lesson and at home

Thank you to every parent that has been able to pay the £20 maintenance agreement (please contact us if this has been a problem)

It means that we have been able to fix 7 chromebooks in year 10 quickly so that students always have access to online resources in every lesson (104 across the school)

Thank you to every student that remembers to charge their chromebook at home and has it in every lesson  
everyday

# Maths Dept Using IT to aid learning

Students self assessing and links to individual resources that will help them make progress



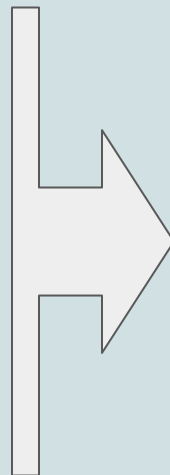
Look in students' google classroom

e-PLC

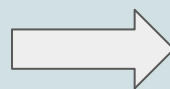
# e-PLC

All students should be able to access their electronic Personalised Learning Checklist from the mathematics google classroom

Unit	Algebra
	<b>Algebra: the basics</b>
A1	I can write and simplify an algebraic expression
A1	I can distinguish between an expression, equation, formula and identity
A1	I can use index notation to multiply algebraic terms
A1	I can use index notation to divide algebraic terms
A1	I can recognise the 'not equal to' and 'identity' symbols
	<b>Expanding and factorising single brackets</b>
A2	I can expand over a single bracket
A2	I can factorise using a single bracket
A2	I can simplify expressions involving brackets (expand, then add/subtract)
	<b>Expressions and substitution into formulae</b>
A3	I can substitute into an expression or formula
A3	I can write and use a formulae
A3	I can substitute values into common Physics formulae
	<b>Equations</b>
A4	I can solve an equation with 1 unknown
A4	I can solve two step equation problems choosing appropriate operations (all four operations)
A4	I can create and solve a two step equation



Topics covered in year 9



The first algebra topic covered in year 10

# Students rate their understanding on their e PLC

Rating (1- Revisit, 2-Practis e, 3-Confid ent)	Corbett Video	MyMaths task	Exam questions	Exam solutions
1 ▾	<u>Video</u>			

Rating (1- Revisit, 2-Practis e, 3-Confid ent)	Corbett Video	MyMaths task	Exam questions	Exam solutions
2 ▾		<u>Practise</u>		

Rating (1-Revisit, 2-Practise, 3-Confident)	Corbett Video	MyMaths task	Exam questions	Exam solutions
3 ▾			<u>Exam Qs</u>	<u>Solutions</u>

## Simplify / Expand & Simplify (F)

A collection of 9-1 Maths GCSE Sample and Specimen questions from AQA, OCR, Pearson-Edexcel and WJEC Eduqas.



Name:	
Total Marks:	

1. Show that  $4(a + 3) - 3(a - 2) = a + 18$ .

[2]

## Simplify / Expand & Simplify (F)

A collection of 9-1 Maths GCSE Sample and Specimen questions from AQA, OCR, Pearson-Edexcel and WJEC Eduqas.



Name:	Nikki @maths2est
Total Marks:	

1. Show that  $4(a + 3) - 3(a - 2) = a + 18$ .

$$\begin{array}{l}
 \overset{\curvearrowright}{\overset{\curvearrowright}}{4(a+3)} - \overset{\curvearrowright}{\overset{\curvearrowright}}{3(a-2)} = a + 18 \\
 \boxed{4a + 12} - \boxed{3a + 6} \\
 = a + 18
 \end{array}$$

[2]

# Maths Dept Using IT to aid learning

Students doing work and getting instant feedback on how they have done (in class and at home)







Welcome To

# MathsPad

Learning of the maths key knowledge  
homework for this half term

1

Drag the numbers on the right to their correct place:

$$\frac{4}{50} = \boxed{\phantom{000}}$$

$$4\% = \boxed{\phantom{000}}$$

$$400\% = \boxed{\phantom{000}}$$

$$90\% = \boxed{\phantom{000}}$$

$$190\% = \boxed{\phantom{000}}$$

$$\frac{4}{20} = \boxed{\phantom{000}}$$

$$\frac{9}{25} = \boxed{\phantom{000}}$$

$$\frac{9}{50} = \boxed{\phantom{000}}$$

0.4

8%

0.04

80%

4

18%

0.8

0.36

0.9

20%

1.9

0.19

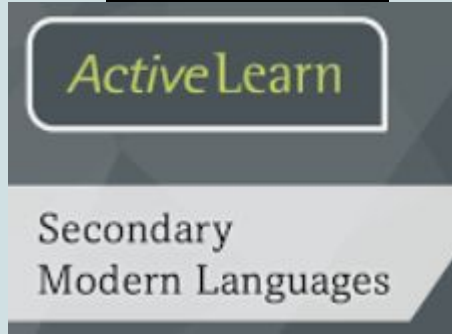
[8]

Reset

Check

# MFL Dept Using IT to aid learning

Something that is specific to MFL students



Teacher sets a task and results come to teacher  
Students can access any of the exercises at any time for independent revision.

Something that can work for any subject!



Flashcard quiz and more



## What is Seneca?

A popular revision and homework platform

## Who can access it?

All students have access to Seneca we have purchased Seneca Premium for enhanced content such as exam questions AI marked and exam BOOST

## How do they access it?

Automatically signed in as access via RM UNIFY



## What subjects are on Seneca?

[Biology](#) // [Business](#) // [Chemistry](#) // [Coding](#) // [Combined Science](#) // [Computer Science](#)  
// [DT](#) // [Economics](#) // [English](#) // [Food Prep](#) // [French](#) // [Geography](#) // [German](#) // [History](#)  
// [Maths](#) // [Media](#) // [Music](#) // [PE](#) // [Physics](#) // [Politics](#) // [Psychology](#) // [RS](#) // [Science](#) //  
[Sociology](#) // [Spanish](#)



- **How effective is Seneca?**
- Seneca helps your child 'learn 2x faster'!
- **What makes Seneca effective?**
- Techniques to enhance memory and understanding based on neuroscience
- Increasing understanding and engagement

[Classes](#)[Upcoming Assignments](#)[Past Assignments](#)[Invite a teacher](#)**TLevelDigital** Mr Tiddy**10MA2S** Miss Patrickson**Year 10** Ms Evans**11S2 Chem** Miss Derbyshire**TSAS Yr11 Computer  
Science** Miss Winter

# How do you want to study?



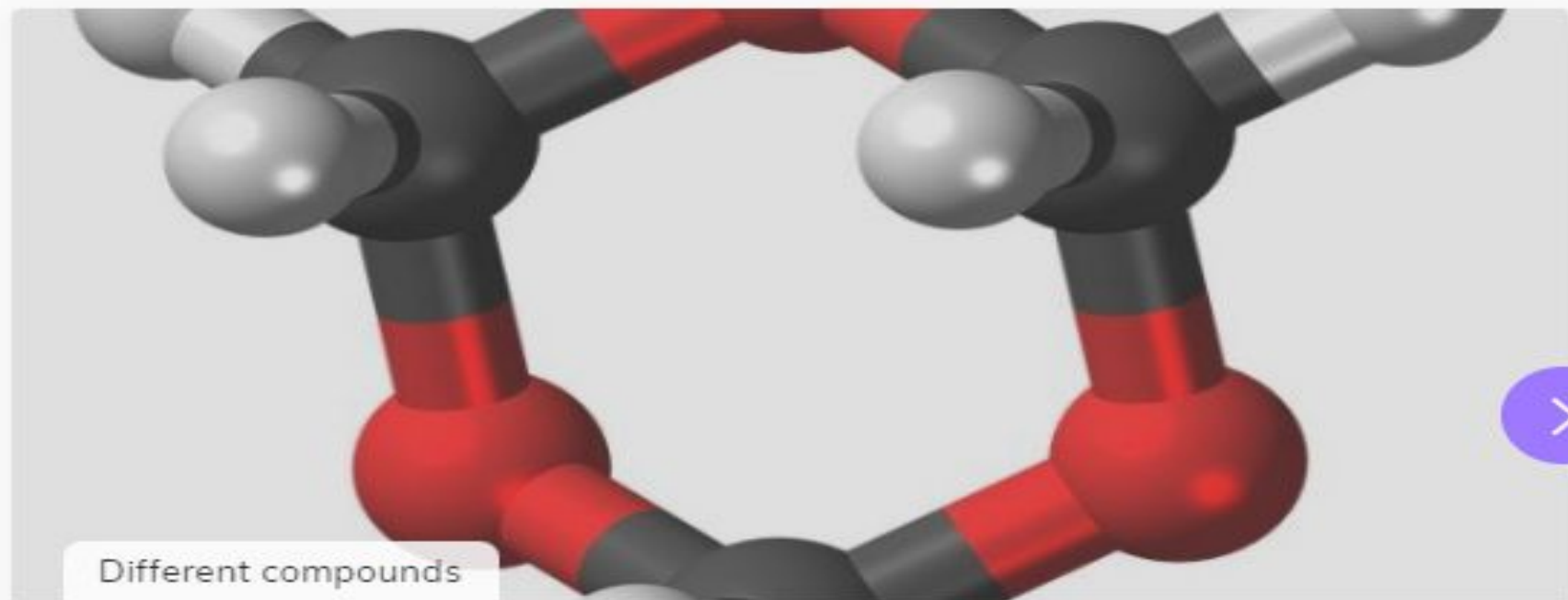
Chemistry: AQA GCSE Higher

[Revise content](#)

[Exam prep](#)

## Compounds

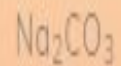
Atoms of different elements can be combined together to create compounds. Compounds have formulae that are made by combining the chemical symbols of the elements that combine to make them.



Different compounds

- Combining different atoms creates different compounds. There are a lot of combinations that can be created.
- A compound is made up of at least 2 different elements.

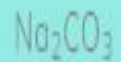
Which of the following are compounds?



The answer is incorrect



Which of the following are compounds?



The answer is correct



## Chemistry: AQA GCSE Higher →



### Smart learning <sup>1</sup>

Boost your memory strength with our smart algorithm's suggestions.

4.4.1 Electrolysis & Metal  
Extraction



## Chemistry: AQA GCSE Higher →



### Wrong answers

Amazing! You don't have any wrong answers right now!



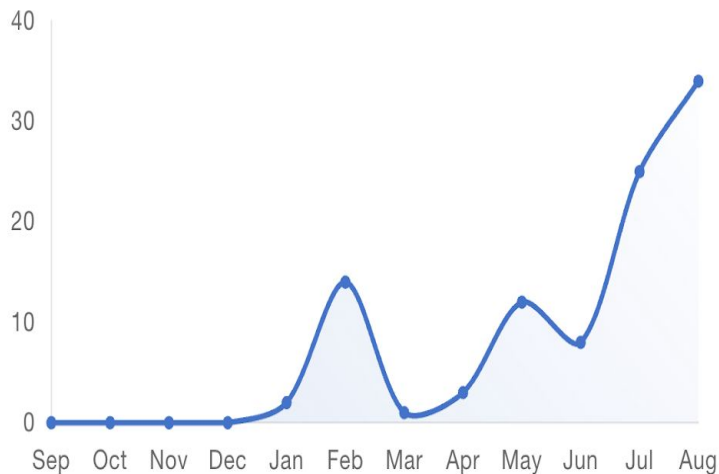
Alexander Rowland alex@sene... ▼

[Send daily gift](#)








[Upgrade Alexander to Premium](#)

## Alexander's study time (mins)

Last year ▼



## Alexander's recent activity

-  Scored **83%** and won 27XP in Exception Words 1h ago
-  Scored **100%** and won 33XP in Understanding New Words 1h ago
-  Finished assignment: Another Mr Fryer Assmt  1d ago
-  Scored **56%** and won 44XP in How Can We Reduce the Global Development Gap? 1d ago
-  Scored **17%** and won 22XP in Economic Causes of Uneven Development 1d ago
-  Scored **17%** and won 22XP in Physical & Historical 1d ago



- Seneca is an online learning platform used in Schools
- The free parent platform allows you to monitor your child's progress
- To sign up simply scan the QR code with your phone camera or go to [senecalearning.com/signup](https://senecalearning.com/signup)
- Once you have signed up connect your account to your child's



- Here are some instructions for getting started:
- [Click here to create a parent account](#) (if you arrive at a login page, make sure to click on the 'Sign up' option)
- Click 'See your child's scores'
- Copy and share the unique link with your child (or you can use the e-mail or Whatsapp buttons)
- Ask them to open the link on their phone or laptop (whatever device they typically use Seneca with)
- Once they've successfully opened the link they'll see a linked confirmation
- Refresh the page on your parent account to review their progress.
- If you have any issues, you can find a video guide [here](#).

To add a second or third child tap the "add another child" button - and repeat steps 3-6 above.

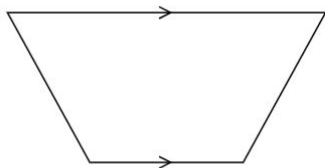
Something that students will use later in year 10  
and into year 11



14 FULL sets (3 papers per sets ) of  
examination papers

Computer marked for instant feedback

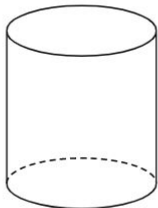
6 (a) Write down the mathematical name of this quadrilateral.




(1)



(b) Write down the mathematical name of this 3-D shape.




(1)

Unlocked papers will need to be attempted (in class but mostly for homework)

Test 3024 1F	R	✓	?	🔒	0	0	0	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
Test 3023 2F	R	✓	?	🔒	0	0	0.00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
Test 3022 3F	R	✓	?	🔒	0	0	🔍	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
Test 3021 1F	R	✓	?	🔒	58	5	94	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Test 3020 2F	R	✓	?	🔒	21	2	2.73	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
Test 3019 3F	R	✓	?	🔒	15	1	🔍	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	

Full coloured blocks showing full marks achieved in that question

White means not answered. Half coloured blocks show only partly correct answers



30 (a) Make  $q$  the subject of  $p = 6q + 7$



(b) Simplify  $(m^{-2})^{-3}$

$q =$



(2)



(1)



A quiz to finish! Let's see what you can remember

[Gcse-maths-formulae-foundation-flash-cards/](https://www.edexcel.com/gcsemathsformulae)









This quizlet will test the Foundation and Higher tier formulae and other important facts




Only look at the sheet if you really can't remember




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## Edexcel GCSE (9-1) Maths: need-to-know formulae

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Areas	Volumes
Rectangle = $l \times w$ 	Cuboid = $l \times w \times h$ 
Parallelogram = $b \times h$ 	Prism = area of cross section $\times$ length 
Triangle = $\frac{1}{2} b \times h$ 	Cylinder = $\pi r^2 h$ 
Trapezium = $\frac{1}{2} (a + b) h$ 	Volume of pyramid = $\frac{1}{3} \times$ area of base $\times$ h 

Circles	Compound measures
Circumference = $\pi \times$ diameter, $C = \pi d$ Circumference = $2 \times \pi \times$ radius, $C = 2\pi r$ Area of a circle = $\pi \times$ radius squared, $A = \pi r^2$ 	Speed speed = $\frac{\text{distance}}{\text{time}}$  Density density = $\frac{\text{mass}}{\text{volume}}$  Pressure The formula for pressure does not need to be learnt, and will be given within the relevant examination questions.

Pythagoras	Trigonometric formulae
Pythagoras' Theorem For a right-angled triangle, $a^2 + b^2 = c^2$ 	Sine Rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$  Cosine Rule $a^2 = b^2 + c^2 - 2bc \cos A$ 

Quadratic equations	Area of triangle
The Quadratic Equation The solutions of $ax^2 + bx + c = 0$ , where $a \neq 0$ , are given by $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	Area of triangle = $\frac{1}{2} ab \sin C$

Foundation tier formulae Higher tier formulae