

# Year 11 Foundation - Mathematics

Links to careers/SMSC/Personal Development:

The National Career Service, Prospects, UCAS, STEM, MindTools provides a wealth of information on various careers, including job profiles, salary expectations, and required qualifications. These resources can help Year 11 math students explore potential career paths, develop essential life skills, and foster personal growth. Encourage them to actively engage with these resources to prepare for their future academic and professional journeys. UK Mathematics Trust (UKMT) offers mathematical competitions, challenges, and resources for students interested in advanced math. Maths watch, Maths genie have very good resources to access exam style questions and modelled student friendly solutions. These resources can help Year 11 math students explore potential career paths, develop essential life skills, and plan for their future academic and professional journeys. Encourage them to actively engage with these resources to make informed decisions about their futures.

## LEARNING JOURNEY



PREPARATION IS THE KEY

a) Career pathway- Sixth form College, Apprenticeships, .....



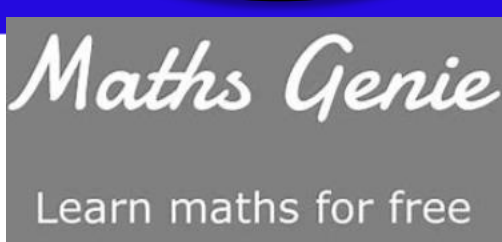
GCSE revision and preparation



Corbettmaths

March Mocks 3<sup>rd</sup> - 14<sup>th</sup>

Home learning: Weekly on SPARX

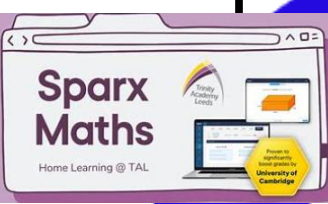


MathsWatch

Maths Genie

On Maths

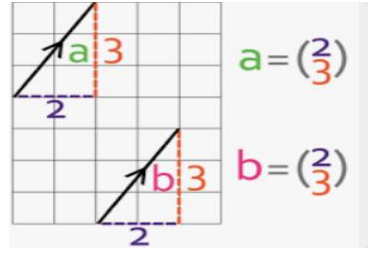
Sparx Maths



Parallel vectors

Add and subtract vectors

Vectors

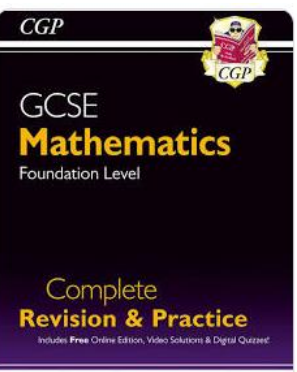


Question level analysis



Nov Mocks 11<sup>th</sup> - 21<sup>st</sup>

Drawing and interpreting pie charts



### Laws of Indices

Laws of indices provide us with rules for simplifying calculations or expressions involving powers of the same base. They are:

Algebra

$$a^m \times a^n = a^{m+n}$$

$$a^{-m} = \frac{1}{a^m}$$

$$a^m \div a^n = a^{m-n}$$

$$a^0 = 1$$

$$a^{\frac{m}{n}} = \sqrt[n]{a^m}$$

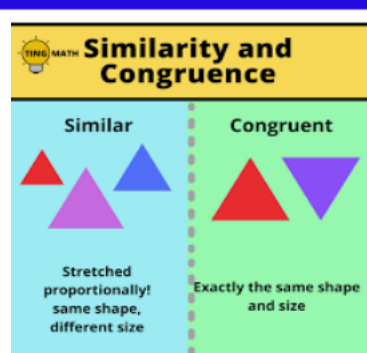
Expanding and factorising expressions

Data

Pictograms

Finding missing lengths in similar shapes

Similarity and congruence in 2D



Percentage change

Fractions, decimals & percentages

Home learning: Weekly on SPARX

**Key:**  
 Unit Topics ■  
 Sub Topics ■  
 Revision ■



## Year 11 learning summary: Rationale

In Year 11 we will explore the following:

Review of multiplicative reasoning, Fractions, Decimal - Geometry and Trigonometry, Statistics and Probability.  
 Review and Preparation-Review all topics covered during the year. Practice with past exam papers and sample questions. Work on time management skills for exams. Use exam question analysis to inform planning strategically to tackle GCSE questions to make progress.  
 Receive feedback on progress and areas for improvement. Set goals for Year 12 mathematics and beyond. By following this Year 11 learning journey, students will have a comprehensive understanding of fundamental mathematical concepts, strong problem-solving skills, and the necessary preparation for Year 12 and beyond, whether they plan to continue studying mathematics at an advanced level or pursue other academic or career pathways. Sixth form, college or apprenticeship post 16



# Year 11 Higher - Mathematics

Links to careers/SMSC/Personal Development:

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## LEARNING JOURNEY



GCSE revision and preparation

a) Career pathway- Sixth form, College and Apprenticeships, .....



Corbettmaths

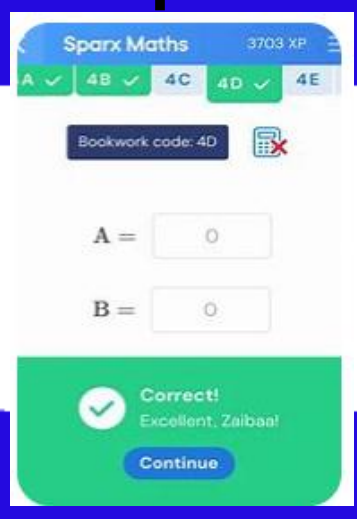


On Maths



Maths Genie

Home learning: Weekly on SPARX



Sparx Maths

March Mocks 3<sup>rd</sup> - 14<sup>th</sup>

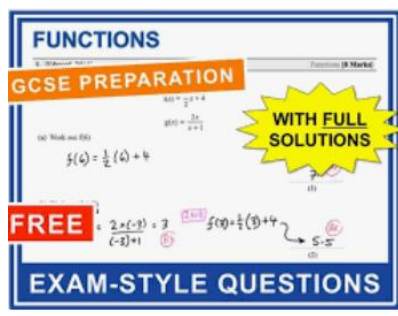


Maths Genie  
Learn maths for free

MathsWatch

Transformations of trigonometric functions

sketch and interpret trigonometric functions

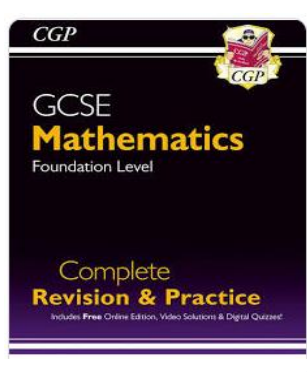


Functions



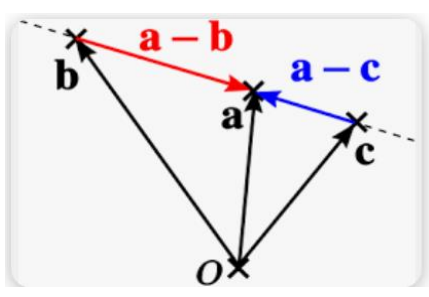
Question level analysis

Nov Mocks 11<sup>th</sup> - 21<sup>st</sup>



Practice exams style questions

Sine and cosine rule in 3D

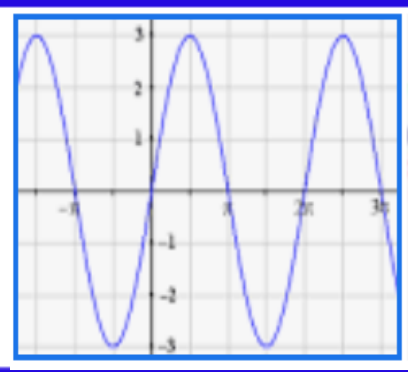


Resultant of two vectors

Vectors

Pythagoras in 3D

Further trigonometry



$$\frac{5}{1 + \sqrt{2}}$$

Rationalising surds

Algebra

Home learning: Weekly on SPARX

**Key:**  
Unit Topics  
Sub Topics  
Revision



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Algebra Fundamentals- Geometry and Trigonometry, Statistics and Probability.  
Review and Preparation-Review all topics covered during the year. Practice with past exam papers and sample questions. Work on time management skills for exams. Use exam question analysis to inform planning strategically to tackle GCSE questions to make progress.  
Receive feedback on progress and areas for improvement. Set goals for Year 12 mathematics and beyond. By following this Year 11 learning journey, students will have a comprehensive understanding of fundamental mathematical concepts, strong problem-solving skills, and the necessary preparation for Year 12 and beyond, whether they plan to continue studying mathematics at an advanced level or pursue other academic or career pathways. Sixth form, college or apprenticeship post 16