Year 11 Foundation - Mathematics

LEARNING JOURNEY

FHS

YEAR 11

PREPARATION IS THE KEY

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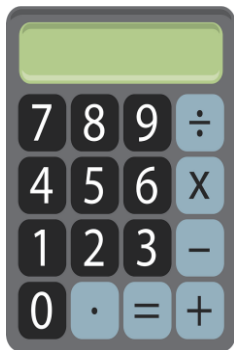
GCSE revision and preparation

Angles in Polygons 1
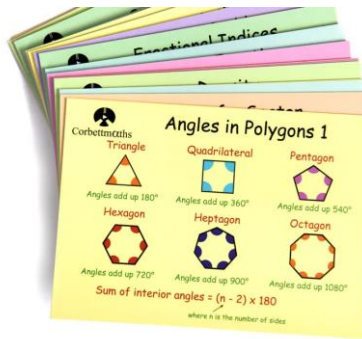
(1) $3x + 4y = 24$ (1)×3
(2) $4x + 3y = 22$ (2)×4
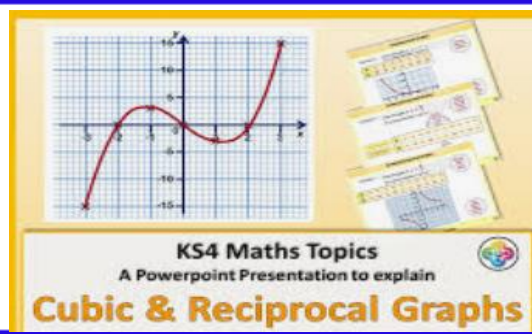$y = 12$

simultaneous equations

Home learning : Weekly on SPARX

March Mocks

Rearranging Formulas

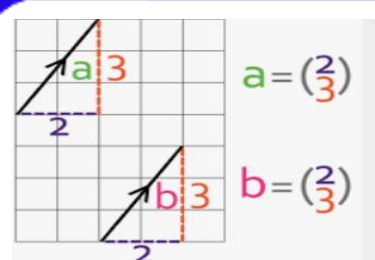$$\frac{x-b}{4} = \frac{x-a}{5}$$ $$\frac{1}{R_T} = \frac{1}{R_1} + \frac{1}{R_2}$$

$$R = \frac{3x+4}{5x-7}$$ $$T = 2\pi\sqrt{\frac{l}{g}}$$
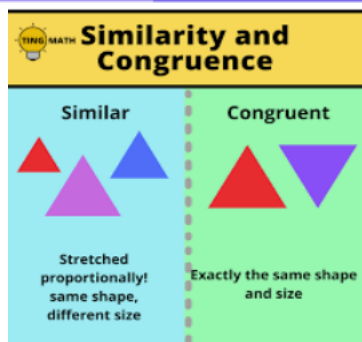
graphs of cubic and reciprocal functions

KS4 Maths Topics
A Powerpoint Presentation to explain
Cubic & Reciprocal Graphs

Rearranging equations

$a\begin{vmatrix}3\\2\end{vmatrix}$ $a = \begin{pmatrix}2\\3\end{pmatrix}$

$b\begin{vmatrix}3\\2\end{vmatrix}$ $b = \begin{pmatrix}2\\3\end{pmatrix}$

Vectors

Similarity and Congruence

Similar	Congruent
Stretched proportionally! same shape, different size	Exactly the same shape and size

Similarity and congruence in 2D

Question Level Analysis

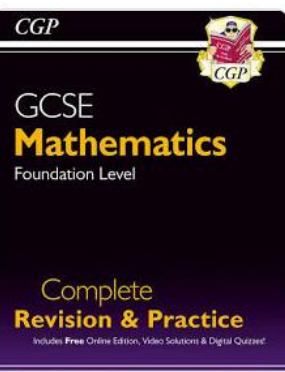**Question level analysis**

Nov Mocks

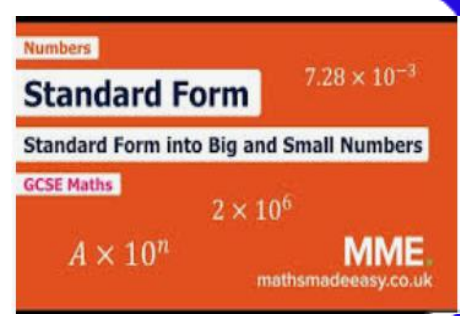## Laws of Indices

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

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

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

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

$$a^0 = 1$$

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

Practice exams style questions

Indices and standard form

Numbers
Standard Form 7.28×10^{-3}
Standard Form into Big and Small Numbers
GCSE Maths 2×10^6
$A \times 10^n$ MME
mathsmadeeasy.co.uk

CGP
GCSE Mathematics
Foundation Level
Complete Revision & Practice
Includes Free Online Edition, Video Solutions & Digital Quizzes!

Fractions	Reciprocal
$\frac{a}{b}$	$\frac{b}{a}$
$\frac{4}{5}$	$\frac{5}{4}$
$2\frac{2}{3}$	$\frac{3}{8}$

Fractions and reciprocals

Basic shapes & their volumes

Sphere	Cylinder	Cone
$V = \frac{4}{3}\pi r^3$	$V = \pi r^2 h$	$V = \frac{1}{3}\pi r^2 h$
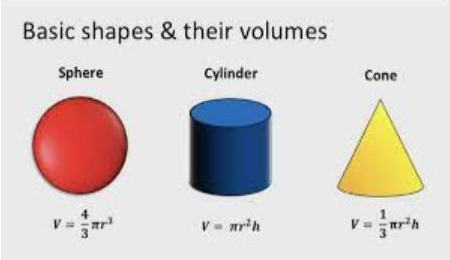
Circles, cylinders, cones and spheres

Home learning : Weekly on SPARX

YEAR 11

Year 11 learning summary: Rationale

In Year 11 we will explore the following:

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