

Year 10 Information Evening

Mathematics

Year 10 Mathematics

WRM – Year 10 Scheme of Learning

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Similarity						Developing Algebra					
	Congruence, similarity and enlargement			Trigonometry			Representing solutions of equations and inequalities			Simultaneous equations		
Spring	Geometry						Proportions and Proportional Change					
	Angles & bearings		Working with circles		Vectors		Ratios & fractions		Percentages and Interest		Probability	
Summer	Delving into data				Using number				Expressions			
	Collecting, representing and interpreting data				Non-calculator methods		Types of number and sequences		Indices and Roots		Manipulating expressions	

Showbie

The screenshot shows the Showbie mobile application interface. At the top, there is a blue navigation bar with three tabs: 'Home' (with a folder icon), 'Groups' (with a speech bubble icon), and 'Students' (with a person icon). A notification bell icon is visible in the top right corner of the blue bar. Below the navigation bar, the page title is 'Yr 10 Maths 10MA-A2X' with a back arrow on the left and a settings gear icon on the right. A search bar with a magnifying glass icon and the text 'Search' is located below the title. The main content area is a list of items:

- Class Discussion** (with a speech bubble icon) - status: *paused*
- All Assignments** (with a list icon) - 15 assigned
- 01. Congruence, Similarity and Enlarg...** (with a folder icon) - 4 folders
- 02. Trigonometry** (with a folder icon) - 4 folders
- 03. Representing Solutions of Equatio...** (with a folder icon) - 4 folders
- 04. Simultaneous Equations** (with a folder icon) - 4 folders
- 05. FDP Angles and Bearings** (with a folder icon) - 4 folders
- 06. Working with Circles** (with a folder icon) - 4 folders

On the right side of the screen, there is a large, faint, light gray watermark of a Showbie folder icon.

Homework

Sparx Maths

Compulsory
1 new
1 started

XP Boost
2 new

Target
2 new

Practice using Sparx

Independent Learning

homework contains questions around the topic(s) set by your teacher recently covered. The questions are tailored to your level of understanding.

▼ Homework due Wednesday 18th August 3pm

KS3 Task 1	<div style="width: 40%;"></div>
KS3 Task 2	<div style="width: 0%;"></div>
KS3 Task 3	<div style="width: 0%;"></div>
KS3 Task 4	<div style="width: 0%;"></div>
KS3 Task 5	<div style="width: 0%;"></div>
KS3 Task 6	<div style="width: 0%;"></div>

▶ Homework due Wednesday 18th August 3pm

- Homework is set weekly and due in on Fridays
- Instructions on Go4Schools
- Students should be completing written work in their Sparx exercise book at home
- Students are encouraged not to complete the task the night before it's due, in case they need to seek support
- Independent Learning tasks can also be completed at any time

Year 10 padlet

:Padlet



Miss Martin • 4mo

Year 10

Revision

Useful Revision Websites

- <https://corbettmaths.com/>
- <https://www.onmaths.com/>
- <https://revisionmaths.com/>
- <https://mathsmadeeasy.co.uk/gcse-maths-revision/aga-gcse-t-papers/>
- <https://www.mathsgenie.co.uk/>
- <https://mathsbot.com/gcseMenu>

PPTX

Useful Revision Websites

Congruence, Similarity and Enlargement

YEAR 10 — SIMILARITY... Congruence, similarity & enlargement

What do I need to be able to do?

- Identify similar figures
- Use the area and perimeter ratios to find missing side lengths
- Use the area and perimeter ratios to find missing area and perimeter
- Calculate the area of a figure
- Calculate the perimeter of a figure

Properties:

- Enlarge: make a shape bigger (or smaller) by a given multiplier (scale factor)
- Scale Factor: the multiplier of enlargement
- Central enlargement: the point the shape is enlarged from
- Similar: when one shape can become another with a uniform scaling, enlargement or translation
- Congruent: the same size and shape
- Corresponding: lines that appear in the same place in two similar situations
- Parallel: straight lines that never meet (keep parallel)

Positive scale factors

- Shape A is enlarged by a factor of 2 to become shape B
- Area of B is 4 times the area of A
- Perimeter of B is 2 times the perimeter of A

Fractional scale factors

- Shape A is enlarged by a factor of 1/2 to become shape B
- Area of B is 1/4 the area of A
- Perimeter of B is 1/2 the perimeter of A

Identify similar shapes

- Similar shapes have the same shape
- Similar shapes have the same angles
- Similar shapes have the same ratio of corresponding sides

Unit-01---Similarity-and-congruence-KO

What do I need to be able to do?

- Enlarge a shape by a positive integer scale factor
- Enlarge a shape by a fractional scale factor
- Enlarge a shape by a negative scale factor

Trigonometry

YEAR 10 — SIMILARITY...

What do I need to be able to do?

- Calculate the sine, cosine, and tangent of an angle
- Calculate the angle given the sine, cosine, or tangent
- Calculate the length of a side given two angles and one side
- Calculate the length of a side given one angle and two sides
- Calculate the length of a side given two sides and one angle

Properties:

- Enlarge: make a shape bigger (or smaller) by a given multiplier (scale factor)
- Scale Factor: the multiplier of enlargement
- Central enlargement: the point the shape is enlarged from
- Similar: when one shape can become another with a uniform scaling, enlargement or translation
- Congruent: the same size and shape
- Corresponding: lines that appear in the same place in two similar situations
- Parallel: straight lines that never meet (keep parallel)

Ratio in right-angled triangles

- Opposite: the side opposite the angle
- Adjacent: the side adjacent to the angle
- Hypotenuse: the longest side

Trigonometry

- Sine: $\sin(\theta) = \frac{\text{opposite}}{\text{hypotenuse}}$
- Cosine: $\cos(\theta) = \frac{\text{adjacent}}{\text{hypotenuse}}$
- Tangent: $\tan(\theta) = \frac{\text{opposite}}{\text{adjacent}}$

Unit-02---Trigonometry-KO

What do I need to be able to do?

- Explore ratio in similar right-angled triangles
- Work fluently with the hypotenuse, opposite and adjacent sides
- Use the tangent ratio to find missing side lengths
- Use the sine and cosine

Ratio and fractions

YEAR 10 — PROPORTION...

What do I need to be able to do?

- Calculate the ratio of two quantities
- Calculate the fraction of a quantity
- Calculate the percentage of a quantity
- Calculate the ratio of two quantities
- Calculate the fraction of a quantity
- Calculate the percentage of a quantity

Properties:

- Enlarge: make a shape bigger (or smaller) by a given multiplier (scale factor)
- Scale Factor: the multiplier of enlargement
- Central enlargement: the point the shape is enlarged from
- Similar: when one shape can become another with a uniform scaling, enlargement or translation
- Congruent: the same size and shape
- Corresponding: lines that appear in the same place in two similar situations
- Parallel: straight lines that never meet (keep parallel)

Ratio and fractions

- Ratio: a comparison of two quantities
- Fraction: a part of a whole
- Proportion: a relationship between two quantities

Unit-08---Ratio-and-Fractions-KO

What do I need to be able to do?

- Link ratio and fractions
- Share in a ratio (given total or one part)
- Use ratios and fractions to make comparisons
- Link ratios and graphs
- Solve problems with currency conversion

padlet.com/arthurterryks4/year10

Year 10 Assessments

- **Assessment Series 1 (13th – 17th November)**

1 hour calculator paper. Includes topics from year 9 and everything up to and including 'Equations and Inequalities' from year 10.

- **Assessment Series 2 (26th February – 1st March)**

1 hour calculator paper. Includes topics from year 9 and everything up to and including 'Vectors' from year 10.

- **Assessment Series 3 (17th – 21st June)**

1 hour 15 minutes Non-Calculator and 1 hour 15 minutes Calculator. Includes topics up to and including 'Non-Calculator Methods)

Useful websites



Corbettmaths



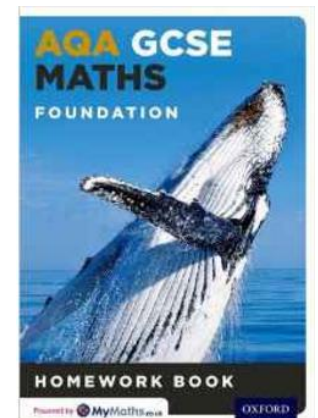
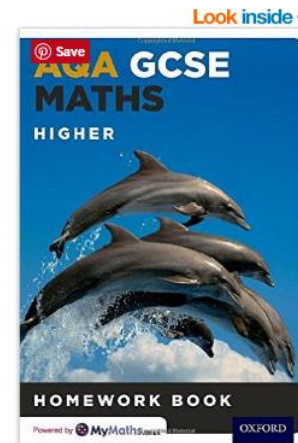
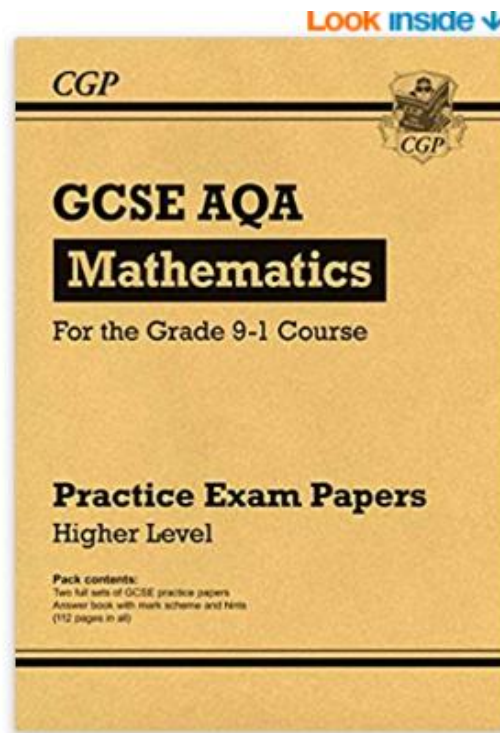
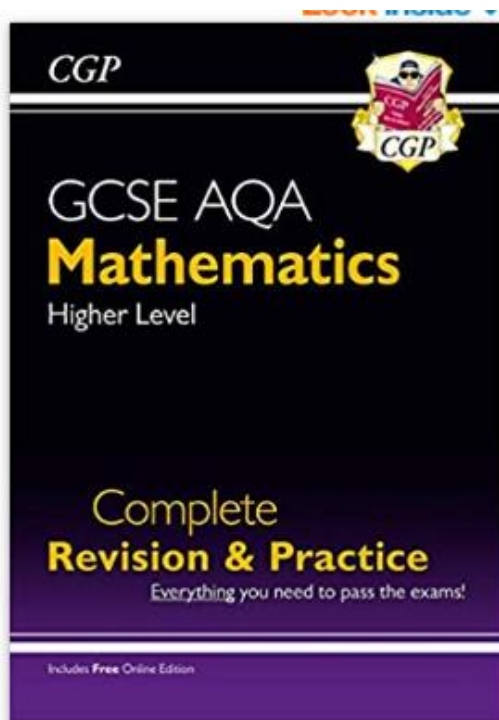
A list of useful websites is also available on the year 10 padlet

How you can support at home

The best way to revise Maths is to practise Maths

The following revision materials would be useful to have at home

CGP Revision Guide (Foundation or Higher)



Any Questions?

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