

Year 9 GSCE Maths Preview

In this session...

- ▶ What you can expect to see in your child's books in Year's 9 and 10
- ▶ How work in your child's books links to our online resources
- ▶ Using these resources to aid with revision

Using RAGs - Year 9 Books

- ▶ A RAG completed after every test taken
 - ▶ Year 9 completing DTT
- ▶ Highlights specific topics they need to improve on

	Place Value	Ordering Decimals	Simplify Algebra	Using a Calculator	Fractions of Amounts AO2	Tally Charts and Pictograms	Factors	Equations Misconceptions	Money	Number Properties	3D Shapes	Using Equations	Fractions, Decimals and Percentages	Conversion Graphs	Total
	1	1	1	1	2	5	3	1	4	2	2	5	6	5	39
Attempt 1	0	0	0	1	2	5	3	0	3	1	2	5	2	2	26
Attempt 2															

Two things I need to improve on:

- 1)
- 2)

To do better next time I should:

Using RAGs - Year 10

- ▶ Regular mini-assessments on yellow paper after a series of topics
- ▶ A completed T1, T2, T3 sheet to highlight areas for improvement

Topic	T1	T2	T3
Types of Triangle			✓
Area of a Parallelogram		✓	
Area of a Triangle	✓		
Area of a Trapezium	✓		
Area and Circumference of a Circle			✓
Compound Circles/Problems			

T1 - Your knowledge of the topic is still developing

T2 - You're gaining a secure knowledge of this topic

T3 - You've mastered these skills. But remember to check your understanding

2D Shapes

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The diagram shows a rectangle with a circle cut out.

Fractions

Question 1. Change these improper fractions into mixed numbers

- (a) $\frac{7}{3} = 2\frac{1}{3}$ (b) $\frac{7}{5} = 1\frac{2}{5}$ (c) $\frac{5}{2} = 2\frac{1}{2}$ (d) $\frac{8}{7} = 1\frac{1}{7}$ (e) $\frac{5}{3} = 1\frac{2}{3}$

Question 2. Change these mixed numbers into improper fractions

- (a) $2\frac{1}{5} = \frac{11}{5}$ (b) $3\frac{1}{2} = \frac{7}{2}$ (c) $1\frac{3}{4} = \frac{7}{4}$ (d) $3\frac{2}{3} = \frac{11}{3}$ (e) $1\frac{2}{5} = \frac{7}{5}$

Fill in the missing numbers:

- (a) $\frac{2}{3} = \frac{4}{6}$ (b) $\frac{1}{5} = \frac{1}{20}$ (c) $\frac{3}{4} = \frac{1}{12}$ (d) $\frac{5}{7} = \frac{10}{7}$

Simplify the following:

$\frac{8}{12} = \frac{2}{3}$ $\frac{14}{35} = \frac{2}{5}$ $\frac{20}{30} = \frac{2}{3}$ $\frac{10}{2} = 5$

Work out the following:

- (a) $\frac{2}{3}$ of 15 = 10 (b) $\frac{7}{10}$ of 20 = 14 (c) $\frac{2}{5}$ of 30 = 12 (d) $\frac{3}{4}$ of 32 = 24

Work out:

(a) $\frac{1}{5} + \frac{1}{5} = \frac{2}{5}$ (b) $\frac{3}{11} + \frac{2}{11} = \frac{5}{11}$ $\frac{10}{21} + \frac{10}{21} = \frac{20}{21}$

Fractions

Work out:

$\frac{2}{5} + \frac{1}{2} = \frac{4}{10} + \frac{5}{10} = \frac{9}{10} + \frac{1}{2} = \frac{2}{6} + \frac{3}{6} = \frac{5}{6}$

Work out these making sure you simplify your answer or write it as a mixed number:

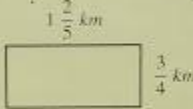
$\frac{5}{9} + \frac{2}{3} = \frac{5}{9} + \frac{4}{9} = \frac{9}{9} = 1$
 $\frac{5}{9} + \frac{13}{18} = \frac{10}{18} + \frac{13}{18} = \frac{23}{18} = 1\frac{5}{18}$

Work out:

$3\frac{1}{10} + 2\frac{2}{3} = 5\frac{3}{30} + 2\frac{20}{30} = 7\frac{23}{30}$
 $3\frac{2}{3} - 1\frac{11}{20} = 2\frac{8}{6} - 1\frac{33}{60} = 1\frac{40}{60} - 1\frac{33}{60} = \frac{7}{60}$

Work out $\frac{1}{6} + \frac{1}{2} + \frac{2}{9} = \frac{2}{18} + \frac{6}{18} + \frac{4}{9} = \frac{2}{18} + \frac{6}{18} + \frac{8}{18} = \frac{16}{18} = \frac{8}{9}$

Work out the perimeter of this rectangle



Problem solving question not attempted

More of these added for current Year 9 cohort

Topic	T1	T2	T3	
Mixed to Improper Fractions				T1 - Your knowledge of the topic is still developing
Equivalent and Simplifying				T2 - You're gaining a secure knowledge of this topic
Fractions Of Amounts				T3 - You've mastered these skills. But remember to check your understanding.
Adding fractions with different denominators				
Adding mixed numbers				
Problem Solving				

Using these RAGs to help with revision

- ▶ Look through books for ANY yellow pages
 - ▶ These will, in one way or another, highlight topics for improvement.
 - ▶ This should be a focus for revision
- ▶ Use resources to revise these focus topics
 - ▶ Mathswatch
 - ▶ MathsBuster (Mr Quinn)
 - ▶ Corbett Maths
 - ▶ OCS Maths Online Scheme of Work

OCS Maths Online Scheme of Work

- ▶ Can be found on the school website
 - ▶ Academic > Subject Areas > Maths

1	Integers and Place Value	Video	Questions	Answers
F 1-3	Understand and use place value Order positive and negative integers Add and subtract integers using both mental and formal written methods Multiply and divide integers using both mental and formal written methods Add, subtract, multiply and divide with negative numbers Multiply and divide by powers of 10 Round to the nearest 10, 100 etc.	Place Value Order numbers Add & Subtract Multiply & Divide Negatives Divide powers of 10 Multiply powers of 10 Nearest 100	Place Value Order numbers Add & Subtract Multiply & Divide Negatives Divide powers of 10 Multiply powers of 10 Nearest 100	Place Value Order numbers Add & Subtract Multiply & Divide Negatives Divide powers of 10 Multiply powers of 10 Nearest 100
2	Angles and Bearings	Video	Questions	Answers
F 1-3	Name the types of angles Apply the rules of angles at a point, angles on a straight line and vertically opposite angles, angles in a triangle or quadrilateral Apply the rules of angles in polygons Apply the rules of angles on parallel lines Use bearings and scale drawings including maps	Types of angles Angle rules Angles - polygons Parallel lines Bearings	Types of angles Angle rules Angles - polygons Parallel lines Bearings	Types of angles Angle rules Angles - polygons Parallel lines Bearings
F/H 4-5	Know the language of tangent, arc, sector and segment	Circle Parts	Circle Parts	Circle Parts
H 6-7	Know and apply circle theorems	Circle Theorems	Circle Theorems	Circle Theorems
3	Substitution and Formulae	Video	Questions	Answers
F 1-3	Substitute numerical values into expressions and formulae	Substitution	Substitution	Substitution
F/H 4-5	Form formulae from word problems Rearrange simple formulae	Rearrange	Rearrange	Rearrange
	Rearrange complex formulae, where the subject appears more than once	Hard Rearrange	Hard Rearrange	Hard Rearrange

Topic	T1	T2	T3
Mixed to Improper Fractions		✓	
Equivalent and Simplifying		✓	
Fractions Of Amounts		✓	
Adding fractions with different denominators			✓
Adding mixed numbers	✓	✓	
Problem Solving	✓	✓	

T1 - Your knowledge of the topic is still developing
T2 - You're gaining a secure knowledge of this topic
T3 - You've mastered these skills. But remember to check your understanding.

11	Fractions	Video	Questions	Answers
F 1-3	Compare and order fractions Work out equivalent fractions Simplify fractions Express one number as a fraction of another Convert between proper fractions and mixed numbers	Order Fractions Equivalent Simplifying Expressing Improper->Mixed Mixed->Improper	Order fractions Equivalent Simplifying Expressing Mixed & improper	Ordering Equivalent Simplifying Expressing Mixed & Improper
	Add, subtract, multiply and divide proper fractions, improper fraction and mixed numbers	Add and subtract Multiply Fractions Divide Fractions	Add and subtract Multiply and Divide	Add and subtract Multiply and Divide
	Find fractions of a given quantity	Frac of Amount	Frac of amount	Frac of amount

Online Scheme of Work

Any Questions?

- ▶ Feel free to look through the books around the room