

**GCSE UNIT SUMMARY: UNIT 4: Fractions and percentages**

**4a) Fractions, decimals and percentages**

<b>Unit Description</b>	<b>Taught</b>	<b>Revision Priority</b>
Use diagrams to find equivalent fractions or compare fractions;		
Write fractions to describe shaded parts of diagrams;		
Express a given number as a fraction of another, using very simple numbers, some cancelling, and where the fraction is both $< 1$ and $> 1$ ;		
Write a fraction in its simplest form and find equivalent fractions;		
Order fractions, by using a common denominator;		
Compare fractions, use inequality signs, compare unit fractions;		
Convert between mixed numbers and improper fractions;		
Add and subtract fractions;		
Add fractions and write the answer as a mixed number;		
Multiply and divide an integer by a fraction;		
Multiply and divide a fraction by an integer, including finding fractions of quantities or measurements, and apply this by finding the size of each category from a pie chart using fractions;		
Understand and use unit fractions as multiplicative inverses;		
Multiply fractions: simplify calculations by cancelling first;		
Divide a fraction by a whole number and another fraction;		
Recall the fraction-to-decimal conversion and convert fractions to decimals;		
Convert a fraction to a decimal to make a calculation easier, e.g. $0.25 \times 8 = \frac{1}{4} \times 8 = 2$		
Recognise recurring decimals and convert fractions such as $\frac{1}{3}$ into recurring decimals;		
Compare and order fractions, decimals and integers, using inequality signs;		
Understand that a percentage is a fraction in hundredths;		
Express a given number as a percentage of another number;		
Convert between fractions, decimals and percentages;		
Order fractions, decimals and percentages, including use of inequality signs.		

**4b) Percentages**

<b>Unit Description</b>	<b>Taught</b>	<b>Revision Priority</b>
Express a given number as a percentage of another number;		
Find a percentage of a quantity without a calculator: 50%, 25% and multiples of 10% and 5%;		
Find a percentage of a quantity or measurement (use measurements they should know from Key Stage 3 only);		
Calculate amount of increase/decrease;		
Use percentages to solve problems, including comparisons of two quantities using percentages;		
Percentages over 100%;		
Use percentages in real-life situations, including percentages greater than 100%: Price after VAT (not price before VAT); Value of profit or loss; Simple interest; Income tax calculations;		
Use decimals to find quantities;		
Find a percentage of a quantity, including using a multiplier;		
Use a multiplier to increase or decrease by a percentage in any scenario where percentages are used;		
Understand the multiplicative nature of percentages as operators.		