



Year 8 Maths Learning Journey

Autumn half term 1 – Fractions and Percentages

Content – Including 'Big Questions'

Core knowledge; Multiplication and division with decimals and fractions	Complete
1. Multiplication of decimals – “How does Place Value effect the product?”	
2. Division by a unit fraction – “What does the denominator tell me to do?”	
3. Division by a non-unit fraction – “What do the numerator and denominator tell me to do?”	
4. Fraction-decimal equivalence / Benchmark fractions – “What knowledge can I apply?”	
Core knowledge; Fractions of Amounts and Amounts as Fractions	Complete
5. One quantity as a fraction of another ; comparing to the whole – “Can I recognise which amount is the whole?”	
6. Fraction as proportion ; unit and non-unit fractions – “Is a half always a half?”	
7. Decimal multiplier – “Will the multiplier make the total greater or less?”	
8. Increasing and decreasing by a fraction – “How can I tell if the total will increase or decrease?”	
9. Reverse fractions; finding the whole – “What was the whole?”	
Core knowledge; Percentages	Complete
10. % as a fraction ; benchmark fractions – “Are a percent and a fraction the same thing?”	
11. % of a quantity (fraction) – “Do I know what the whole is?”	
12. % of a quantity (comparing different % of same whole) – “Do I know what the whole is?”	
13. % increase and decrease - “Do I know what the whole is?”	
14. % of a quantity using a decimal multiplier - “Do I know what the whole is?”	
15. Reverse percentages ; finding the whole – “What was the whole?”	
Core knowledge; One quantity as a percentage of another	Complete
16. Writing one quantity as a percent of another ; finding the whole (calculator) – “Do I know what the whole is?”	
17. Comparing one quantity as a percentage of another – “Do I know what the whole is?”	

Year 8 Maths Learning Journey

Autumn half term 1 – Fractions and percentages



Learning Checkpoints

Learning Check Title	Score	Dirt
Multiplication and division with decimals and fractions		
Fractions of amounts and amounts as fractions		
Percentages		
One quantity as a percentage of another		

Key Vocabulary

Percent: 'out of 100'. The whole is divided into 100 equal parts - the percentage number tells us how many parts.

Percentage: A fraction expressed as the number of parts per hundred and recorded using the notation %

Fraction - the result of dividing one integer by a second integer

Proportion: if two variables x and y are related by an equation of the form $y = kx$, then y is directly proportional to x ; it may also be said that y varies directly as x . When y is plotted against x this produces a straight line graph through the origin.

Multiplier: a quantity by which a given number (the multiplicand) is to be multiplied.

Part: A sub-division of a whole.

Whole: A total amount. E.g. 1 whole = 3 thirds or a full shape

Decimal – where the tenths, hundredths, thousandths etc. are represented as digits following a decimal point

Tenth: $1/10$. A whole divided into ten equal pieces

Hundredth: $1/100$ A whole divided into 100 equal pieces.

Equivalent: equal in value, amount, function, meaning, etc.