



Year 9 Maths Learning Journey

Spring Term 2

Reasoning with number: Using percentages

Core knowledge	Reference number
Use the equivalence of fractions, decimals and percentages (R) “Can any percentage under 100% be changed to a decimal or fraction?”	WORKSHEET
Calculate percentage increase and decrease (R) “When finding percentage increase, will a multiplier be more or less than 1?”	WORKSHEET
Express a change as a percentage (R) “What is the difference between profit and loss?”	WORKSHEET
Solve reverse percentage problems “What’s different about finding a percentage of an amount and finding a percentage increase or decrease?”	WORKSHEET
Recognise and solve percentage problems (non-calculator) “How can you tell what approach to take to a percentage problem? What are the clues in the question?”	WORKSHEET
Recognise and solve percentage problems (calculator) “How can you tell what approach to take to a percentage problem? What are the clues in the question?”	WORKSHEET
Solve problems with repeated percentage change (H) “What’s a quick way of multiplying by the same number twice? Three times? Four times?”	WORKSHEET

Learning Checkpoints

LC Title	Completed	Dirt
Using percentages		

Key Vocabulary

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

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

Percentage – a fraction expressed as the number of parts per 100 and recorded using %

Convert – changing from one quantity or measurement to another

Equivalent – a numerical or algebraic statement or expression which is the same as the original

Increase – make something bigger (in size or quantity)

Decrease - make something smaller (in size or quantity)

Reduce – divide the numerator and denominator by a common factor

Multiplier – the number you are multiplying by

Profit – the money made after expenses

Loss – the differences between the cost price and the selling price

Reverse – the opposite of another operation

Related facts – related to the four operations and the recall about the composition of a number

Bar model - a pictorial representation of a problem or concept where bars or boxes are used to represent the known and unknown quantities

Repeated – the process of repeatedly doing something (addition, subtraction etc.)

Depreciate – to go down in value

Power/index/exponent - a number positioned above and to the right of another (base). Can be negative, zero or fractional