

HIGHER GCSE UNIT SUMMARY: UNIT 11: Multiplicative reasoning: direct and inverse proportion, relating to graph form for direct, compound measures, repeated proportional change

11) Multiplicative reasoning: direct and inverse proportion, relating to graph form for direct, compound measures, repeated proportional change

Unit Description	Taught	Revision Priority
Express a multiplicative relationship between two quantities as a ratio or a fraction, e.g. when $A:B$ are in the ratio 3:5, A is $\frac{3}{5}B$. When $4a = 7b$, then $a = \frac{7b}{4}$ or $a:b$ is 7:4;		
Solve proportion problems using the unitary method;		
Work out which product offers best value and consider rates of pay;		
Work out the multiplier for repeated proportional change as a single decimal number;		
Represent repeated proportional change using a multiplier raised to a power, use this to solve problems involving compound interest and depreciation;		
Understand and use compound measures and: convert between metric speed measures; convert between density measures; convert between pressure measures;		
Use kinematics formulae from the formulae sheet to calculate speed, acceleration, etc (with variables defined in the question);		
Calculate an unknown quantity from quantities that vary in direct or inverse proportion;		
Recognise when values are in direct proportion by reference to the graph form, and use a graph to find the value of k in $y = kx$;		
Set up and use equations to solve word and other problems involving direct proportion;		
Relate algebraic solutions to graphical representation of the equations;		
Recognise when values are in inverse proportion by reference to the graph form;		
Set up and use equations to solve word and other problems involving inverse proportion, and relate algebraic solutions to graphical representation of the equations.		