

KS4 Learning Journey

GCSE Higher Tier – Year 11 Learning Cycle 3

Please watch the video on www.corbettmaths.com for each topic.

Proportionality	Video number
Solve worded problems involving direct and inverse proportion	255a
Solve algebraic problems involving direct proportion	254
Solve algebraic problems involving inverse proportion	255
Recognise and interpret graphs that illustrate direct proportion	

Kinematics	Video number
Plot and interpret graphs involving distance, speed and acceleration.	171
Calculate or estimate gradients of graphs and areas under graphs and interpret results in cases such as distance-time graphs, velocity-time graphs and financial contexts.	389
Interpret the gradient of a straight-line graph as a rate of change.	189
Use the gradients of chords and tangents to find average and instantaneous rates of change.	390a

Functions	Video number
Interpret expressions as functions with an input and an output	386
Find an inverse function	369
Find a composite function	370

Iteration	Video number
Work with general iterative processes	373
Use systematic trial and improvement to find approximate solutions to equations where there is no simple analytical method	116

Proof	Video number
Argue mathematically to show algebraic expressions are equivalent	
Use algebra to support and construct arguments to include proof	365
Apply angle facts, triangle congruence and similarity to obtain simple proofs	365
Understand Pythagoras' theorem and the fact that the base angles of an isosceles triangle are equal, and use known results to obtain simple proofs	366

KS4 Glossary
GCSE Higher Tier – Year 11 Learning Cycle 3

Proportionality	
Direct Proportion	Direct proportion is a statement of equality between two ratios. As one quantity increases, so does the other.

Kinematics

Functions	
Functions	A function maps a set of input values onto a set of output values. No input value can be mapped to more than one output value.
Inverse	The inverse of a function returns each of its output values to the corresponding input value.

Iteration	
Iteration	The repeated application of a function or process in which the output of each step is used as the input for the next iteration

Proof
