

KS4 Learning Journey

GCSE Higher Tier – Year 10 Learning Cycle 2

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

Pythagoras and Trigonometry	Video number
Know and be able to apply Pythagoras' theorem	257
Know and be able to apply the trigonometric ratios for Sin Cos and Tan	329
Apply Pythagoras and Trigonometry to find angles and lengths in right angled triangles in 2D	330,331
Apply Pythagoras and Trigonometry to find angles and lengths in right angled triangles in 3D	259,332
Know the exact values of $\sin x$, $\cos x$ and $\tan x$ for $x = 0^\circ, 30^\circ, 45^\circ, 60^\circ$ or be able to find them using the special triangles	341

Quadratics	Video number
Expand double brackets	14
Expand triple brackets	15
Factorise quadratics with a coefficient of x^2 of one	118
Factorise quadratics with other coefficients of x^2	119
Factorise a difference of 2 squares	120
Solve a quadratic equation by factorising	266
Completing the square	10
Finding the vertex	371
Graphs of quadratics	265

Probability	Video number
Use the probability scale to relate relative expected frequency to theoretical probability	248
Know that the probabilities of exhaustive events sum to 1	250
Understand that increasing the number trials of an experiment will improve the accuracy of probability estimates	
Use tables, grids, Venn diagrams, tree diagrams and possibility (sample) spaces	252,246,380
Use set notation with Venn diagrams	379
Calculate probabilities of combined independent and dependent events including use of tree diagrams	249

Circle Theorems	Video number
Identify and apply circle definitions: centre, radius, chord, diameter, circumference, tangent, arc, sector, segment	61
Apply the standard circle theorems and use them to prove related results	64,65
Prove the standard circle theorems	65a-f

Area and Perimeter	Video number
Calculate perimeters of 2D shapes, including circles	241, 62
Calculate areas of circles and composite shapes	47
Calculate arc lengths, angles and areas of sectors of circles	58.63
Know and apply formulae to calculate: area of triangles, parallelograms, trapezia;	44,48,49
Know the formulae: circumference of a circle and area of a circle	59, 60

KS4 Glossary

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Pythagoras and Trigonometry	
Hypotenuse	The hypotenuse is the longest side on a right-angled triangle and is always opposite the right angle.

Quadratics	
Quadratic	A quadratic equation is one that can be expressed in the form $ax^2 + bx + c$, where a, b and c are constants.

Probability	
Relative Frequency	How often something happens divided by the number of trials.
Tree Diagram	A tree diagram is used to represent the outcomes of two or more experiments with discrete outcomes.

Circle Theorems	
Perpendicular	Lines at right angles to each other are perpendicular.
Tangent	A tangent is a straight line which just touches a circle or a curve at a point.

Area and Perimeter	
Pi	Pi is the ratio of the circumference of a circle to its diameter.
Sector	A sector is part of a circle, formed by drawing two lines from the centre to the circumference.