A guide to use GeoGebra when teaching AS and A level Mathematics

Below you can find links to videos designed to help you teach the content of AS and A level Mathematics qualifications with the aid of Geogebra.

AS Mathematics – Pure Mathematics content

Explore how the graph of $y = (x + p)^2 + q$ changes as the values of p and q change using GeoGebra. • GeoGebra interactive

Explore how the value of the discriminant changes with k using GeoGebra.
• GeoGebra interactive

Explore the trajectory of the spear using GeoGebra. • GeoGebra interactive

Find the point of intersection graphically using GeoGebra. • GeoGebra interactive

Plot the curve and the line using GeoGebra to find the two points of intersection.
• GeoGebra interactive

Explore how the value of k affects the line and the curve using GeoGebra.
• GeoGebra interactive

Explore which regions on the graph satisfy which inequalities using GeoGebra.• GeoGebra interactive

Explore the graph of $y = (x - p)(x - q)(x - r)$ where p, q and r are constants using GeoGebra.
• GeoGebra interactive

Explore the graph of $y = (x - p)(x - q)(x - r)(x - s)$ where p, q, r and s are constants using GeoGebra. • GeoGebra interactive

Explore the graph of $y = \frac{a}{x}$ for different values of a in GeoGebra. • GeoGebra interactive

Explore translations of the graph of $y = x^3$ using GeoGebra. • GeoGebra interactive

Explore stretches of the graph of $y = x(x - 2)(x + 1)$ using GeoGebra.
• GeoGebra interactive

Explore the gradient formula using GeoGebra. • GeoGebra interactive

Explore lines of a given gradient passing through a given point using GeoGebra.
• GeoGebra interactive

Plot the solution on a graph using GeoGebra. • GeoGebra interactive

Explore this solution using GeoGebra. • GeoGebra interactive

Draw both lines and the triangle AOB on a graph using GeoGebra. • GeoGebra interactive

Explore the general form of the equation of a circle using GeoGebra.
- GeoGebra interactive

Explore intersections of straight lines and circles using GeoGebra. • GeoGebra interactive

Explore the circle theorems using GeoGebra. • GeoGebra interactive

Explore triangles and their circumcircles using GeoGebra. • GeoGebra interactive

Use GeoGebra to find the values of x for which the first four terms of this expansion give a good approximation to the value of the function. • GeoGebra interactive

Explore the cosine rule using GeoGebra. • GeoGebra interactive

Explore the sine rule using GeoGebra. • GeoGebra interactive

Explore the area of a triangle using GeoGebra. • GeoGebra interactive

Explore the solution step-by-step using GeoGebra. • GeoGebra interactive

Plot transformations of trigonometric graphs using GeoGebra. • GeoGebra interactive

Use GeoGebra to explore the values of sin θ, cos θ and tan θ for any angle θ in a unit circle.
- GeoGebra interactive

Explore vector addition using GeoGebra. • GeoGebra interactive

Explore this solution as a vector diagram on a coordinate grid using GeoGebra.
- GeoGebra interactive

Explore the magnitude of a vector using GeoGebra. • GeoGebra interactive

Use GeoGebra to show that diagonals of a parallelogram bisect each other.
- GeoGebra interactive

Explore the gradient of the chord AP using GeoGebra. • GeoGebra interactive

Explore the tangent and normal to the curve using GeoGebra. • GeoGebra interactive

Explore increasing and decreasing functions using GeoGebra. • GeoGebra interactive

Explore the solution using GeoGebra. • GeoGebra interactive

Use GeoGebra to explore the key features linking $y = f(x)$ and $y = f'(x)$.
- GeoGebra interactive

Explore the solution using GeoGebra. • GeoGebra interactive

Explore the relationship between exponential functions and their derivatives using GeoGebra.
- GeoGebra interactive

Use GeoGebra to draw transformations of $y = e^x$. • GeoGebra interactive

AS Mathematics – Statistics content

Explore box plots and outliers using technology. • GeoGebra interactive

Explore the regression line and analysis using technology. • GeoGebra interactive

Explore the cumulative probabilities for the binomial distribution for this example using technology. • GeoGebra interactive

Use technology to explore the locations of the critical values for each tail in this example. • GeoGebra interactive

Explore box plots and outliers using technology. • GeoGebra interactive

AS Mathematics – Mechanics content

Explore how the area of the trapezium changes as the value of T changes using technology. • GeoGebra interactive

A level Mathematics – Pure Mathematics content

Explore graphs of f(x) and |f(x)| using GeoGebra. • GeoGebra interactive

Explore intersections of straight lines and modulus graphs using GeoGebra. • GeoGebra interactive

Explore graphs of functions on a given domain using GeoGebra. • GeoGebra interactive

Explore functions and their inverses using GeoGebra. • GeoGebra interactive

Explore graphs of modulus functions using GeoGebra. • GeoGebra interactive

Explore combinations of transformations using GeoGebra. • GeoGebra interactive

Explore the solution using GeoGebra. • GeoGebra interactive

Use GeoGebra to explore why the expansions are only valid for certain values of x. • GeoGebra interactive

Explore the arc length of a sector using GeoGebra. • GeoGebra interactive

Explore the area of a sector using GeoGebra. • GeoGebra interactive

Explore the area of a segment using GeoGebra. • GeoGebra interactive

Use GeoGebra to explore approximate values of sin θ. cos θ and tan θ for values of θ close to 0. • GeoGebra interactive

Explore transformations of the graphs of reciprocal trigonometric functions using GeoGebra. • GeoGebra interactive

Explore the proof step-by-step using GeoGebra. • GeoGebra interactive

Explore how you can transform the graphs of $y = \sin x$ and $y = \cos x$ to obtain the graph of $y = 3 \sin x + 4 \cos x$ using GeoGebra. • GeoGebra interactive

Use GeoGebra to explore maximums and minimums of curves in the form $R \cos(\theta - \alpha)$.

• GeoGebra interactive

Explore the solution to this modelling problem graphically using GeoGebra.

• GeoGebra interactive

Sketch this parametric curve using GeoGebra. • GeoGebra interactive

You can graph the parametric equations using GeoGebra. • GeoGebra interactive

Explore this curve graphically using GeoGebra. • GeoGebra interactive

Use GeoGebra to graph the parametric equations. • GeoGebra interactive

Explore curves with parametric equations of this form using GeoGebra.

• GeoGebra interactive

Find points of intersection of this curve with the coordinate axes using GeoGebra.

• GeoGebra interactive

Explore the relationship between sin and cos and their derivatives using GeoGebra.

• GeoGebra interactive

Explore the function a^x and its derivative using GeoGebra. • GeoGebra interactive

Explore the graph of this function using GeoGebra. • GeoGebra interactive

Explore the graph of this curve and the normal at this point using GeoGebra.

• GeoGebra interactive

Explore the solution to this example graphically using GeoGebra.

• GeoGebra interactive

Locate the root of $f(x) = \ln x - \frac{1}{x}$ using GeoGebra. • GeoGebra interactive

Explore the iterations graphically using GeoGebra. • GeoGebra interactive

Explore how the Newton–Raphson method works graphically and algebraically using GeoGebra. • GeoGebra interactive

Explore the area between two curves using GeoGebra. • GeoGebra interactive

Explore under- and over- estimation when using the trapezium rule, using GeoGebra.

• GeoGebra interactive

Explore families of solutions using GeoGebra. • GeoGebra interactive

Explore the solution to this example graphically using GeoGebra.

• GeoGebra interactive

Explore the solution to this example visually in 3D using GeoGebra.

• GeoGebra interactive

Explore the solution to this example visually in 3D using GeoGebra.

• GeoGebra interactive

A level Mathematics – Statistics content

Explore the original and coded data graphically using technology. • COMING SOON
Explore set notation on a Venn diagram using GeoGebra. • COMING SOON
Explore the normal distribution curve using technology. • COMING SOON

A level Mathematics – Mechanics content

Explore the moment of a force acting about a point using GeoGebra. • COMING SOON
Explore the moment acting about pivot M using GeoGebra. • COMING SOON
Explore the moment acting about pivot M using GeoGebra. • COMING SOON
Explore the resultant of two forces using GeoGebra. • COMING SOON
Explore this problem with different masses, slopes and frictional coefficients using GeoGebra. • COMING SOON
Explore the parametric equations for the path of the particle and their Cartesian form, both algebraically and graphically using technology. • COMING SOON
Explore the forces in this question in a more detailed diagram using GeoGebra.
• COMING SOON
Explore the solution to this example using technology. • COMING SOON
Explore the solution to this example using technology. • COMING SOON