A guide to use calculators 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 the calculator.

AS Mathematics – Pure Mathematics content

Use your calculator to enter negative and fractional powers.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use your calculator to check solutions to quadratic equations quickly.

- Graphic calculator tutorial
- Scientific calculator tutorial

Check solutions to simultaneous equations using your calculator.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use the “C, and ! functions on your calculator to answer this question.

- Graphic calculator tutorial
- Scientific calculator tutorial

Work out each coefficient quickly using the “C, and power functions on your calculator.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use trigonometrical functions on your calculator.

- Graphic calculator tutorial
- Scientific calculator tutorial

Check vector calculations on your calculator.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use your calculator to check solutions to quadratic equations quickly.

- Graphic calculator tutorial
- Scientific calculator tutorial

Find the value of the first derivative at a given point on your calculator.

- Graphic calculator tutorial
- Scientific calculator tutorial

Check your solution to a definite integral using your calculator.

- Graphic calculator tutorial
- Scientific calculator tutorial
Work this out in one go using the e[^1] button on your calculator.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use the logarithm buttons on your calculator.

- Graphic calculator tutorial
- Scientific calculator tutorial

**AS Mathematics – Statistics content**

Use your calculator to find the mean and median of discrete data.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use your calculator to find summary statistics from a frequency table.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use your calculator to find summary statistics from a grouped frequency table.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use the nCr function on your calculator to work out binomial probabilities.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use the binomial cumulative distribution function on your calculator. You want to find P(X ≤ 7), not P(X = 7). On some calculators, this is labelled 'Binomial CD'.

- Graphic calculator tutorial
- Scientific calculator tutorial

Find the critical value for a hypothesis test using your calculator.

- Graphic calculator tutorial
- Scientific calculator tutorial

**AS Mathematics – Mechanics content**

Check calculations with vectors on your calculator.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use your calculator to check solutions to quadratic equations quickly.

- Graphic calculator tutorial
- Scientific calculator tutorial
A level Mathematics – Pure Mathematics content

Check solutions for a set of partial fractions.
  • Graphic calculator tutorial
  • Scientific calculator tutorial

Use your calculator to work out values of modulus functions.
  • Graphic calculator tutorial
  • Scientific calculator tutorial

Use the table function on your calculator to generate terms in the sequence for this function, or to check an $n$th term.
  • Graphic calculator tutorial
  • Scientific calculator tutorial

Calculate the sum of series.
  • Graphic calculator tutorial
  • Scientific calculator tutorial

Check your answer by using your calculator to calculate the sum of the series.
  • Graphic calculator tutorial
  • Scientific calculator tutorial

Use your calculator to calculate the coefficients of the binomial expansion.
  • Graphic calculator tutorial
  • Scientific calculator tutorial

Use your calculator to evaluate trigonometric functions in radians.
  • Graphic calculator tutorial
  • Scientific calculator tutorial

Solve this equation numerically using your calculator.
  • Graphic calculator tutorial
  • Scientific calculator tutorial

Use your calculator to evaluate inverse trigonometric functions in radians.
  • Graphic calculator tutorial
  • Scientific calculator tutorial

Use the polynomial function on your calculator to solve the quadratic equation.
  • Graphic calculator tutorial
  • Scientific calculator tutorial
Use the iterative formula to work out \( x_1, x_2 \) and \( x_3 \). You can use your calculator to find each value quickly.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use your calculator to check your value of \( a \) using numerical integration.

- Graphic calculator tutorial
- Scientific calculator tutorial

Evaluate integrals of the product of two functions.

- Graphic calculator tutorial
- Scientific calculator tutorial

Perform calculations on 3D vectors using your calculator.

- Graphic calculator tutorial
- Scientific calculator tutorial

**A level Mathematics – Statistics content**

Use your calculator to calculate the PMCC.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use the Normal CD function on your calculator to find probabilities from a normal distribution.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use the Inverse Normal function on your calculator to calculate values which satisfy given probability statements for the normal distribution.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use the Inverse Normal function on your calculator with the standard normal distribution.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use the inverse normal distribution function on your calculator to find the critical region directly.

- Graphic calculator tutorial
- Scientific calculator tutorial
A level Mathematics – Mechanics content

Use your calculator to solve a quadratic equation.

- Graphic calculator tutorial
- Scientific calculator tutorial

Use the STO function to store exact values on your calculator.

- Graphic calculator tutorial
- Scientific calculator tutorial