

Check that basic settings shown at the bottom of the screen are

Standard Cplx Rad

Use the **Math2** keyboard to enter the complex number $1 + \sqrt{3}i$ and tap **EXE**.

The magnitude can be found using the $|\square|$ template.

Other useful tools can be found in the **Action, Complex** menu.

Tap **Action, Complex, arg** to find the argument.

Try some of the other functions in the Complex menu such as the conjugate, real part and imaginary part.

Notice that Classpad does not automatically expand a power of a complex number.

Screenshot of the ClassPad II interface. The top bar shows 'Edit Action Interactive'. The main display area shows the input $1 + \sqrt{3}i$ and the result $1 + \sqrt{3} \cdot i$. Below the display, the magnitude $|\square|$ is shown with the result 2 . The bottom keyboard shows the 'Math2' row with the i key highlighted. The bottom status bar shows 'Alg Standard Cplx Rad'.

Screenshot of the ClassPad II interface. The top bar shows 'Edit Action Interactive'. The main display area shows the input $1 + \sqrt{3}i$ and the result $1 + \sqrt{3} \cdot i$. The 'Action' menu is open, showing options like Transformation, Advanced, Calculation, Complex, List, Matrix, Vector, Equation/Inequal, Assistant, Distribution/Inv, Financial, and Command. The 'Complex' menu is highlighted, showing options like conjg, re, im, cExpand, compToPol, compToTrig, and compToRect. The bottom keyboard shows the 'Math2' row with the i key highlighted. The bottom status bar shows 'Alg Standard Cplx Rad'.

Screenshot of the ClassPad II interface. The top bar shows 'Edit Action Interactive'. The main display area shows the input $1 + \sqrt{3}i$ and the result $1 + \sqrt{3} \cdot i$. Below the display, the argument $\arg(\square)$ is shown with the result $\frac{\pi}{3}$. The bottom keyboard shows the 'Math2' row with the i key highlighted. The bottom status bar shows 'Alg Standard Cplx Rad'.

Screenshot of the ClassPad II interface. The top bar shows 'Edit Action Interactive'. The main display area shows the input $1 + \sqrt{3}i$ and the result $1 + \sqrt{3} \cdot i$. Below the display, the fourth power $(1 + \sqrt{3} \cdot i)^4$ is shown with the result $(1 + \sqrt{3} \cdot i)^4$. The bottom keyboard shows the 'Math2' row with the i key highlighted. The bottom status bar shows 'Alg Standard Cplx Rad'.

We can use **cExpand** to simplify a power.

ClassPad will help with conversions into most forms of complex numbers - use the Action, Complex menu.

These forms usually make the magnitude and argument of a complex number very obvious.

ClassPad II interface showing the **cExpand** function being used to simplify the expression $(1+\sqrt{3}\cdot i)^4$. The result displayed is $-8-8\sqrt{3}\cdot i$. The calculator is in the **Complex** mode.

ClassPad II interface showing the **Action** menu with the **Complex** submenu open. The **compToTrig** option is highlighted. The calculator is in the **Complex** mode.

ClassPad II interface showing the **compToTrig** function being used to convert the expression $(1+\sqrt{3}\cdot i)^4$ to polar form. The result displayed is $16\cdot\left(\cos\left(\frac{-2\cdot\pi}{3}\right)+\sin\left(\frac{-2\cdot\pi}{3}\right)\cdot i\right)$. The calculator is in the **Complex** mode.

ClassPad II interface showing the **compToPol** function being used to convert the expression $(1+\sqrt{3}\cdot i)^4$ to exponential form. The result displayed is $16\cdot e^{\pi\cdot\frac{-2\cdot i}{3}}$. The calculator is in the **Complex** mode.