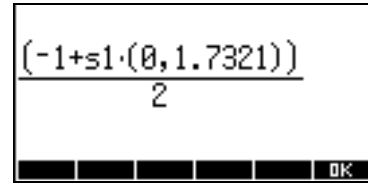


Eg. Find the complex solutions to the complex equation  $f(z) = z^2 + z + 1$



A calculator display showing the complex solution  $\frac{-1 + s1 \cdot (0, 1.7321)}{2}$ . The display is divided into two lines: the top line contains  $(-1+s1 \cdot (0,1.7321))$  and the bottom line contains  $2$ . Below the display is a row of function keys, with the 'OK' key visible on the right.

Result: Since this is a quadratic it can be done with the QUAD formula mentioned in example 1, since it is capable of giving complex results. This is shown above, rounded to 4 dec. pts. It's up to you of course to realize that (0,1.7321) is  $\sqrt{3}i$  but if you don't recognize it then copy just that portion and square it. The 'S1' means  $\pm$ . An alternative method is to use the **POLYROOT** function and store the results to a matrix. This offers the advantage of being able to examine the result more easily by **EDIT**ing the matrix, and also of being able to access each root by referring to the matrix elements in a calculation (eg M1(1), M1(2) etc.).