

Graphing Technology Lab

Solving Quadratic Equations

Casio FX-9750G

You can use a Casio FX-9750G to solve quadratic equations.

ACTIVITY Finding Roots

Solve each equation.

a. $3x^2 - 4x + 1 = 0$

Step 1 Clear the calculator memory.

KEYSTROKES: **MENU** **ALPHA** **[F]** **RESET** **F1**

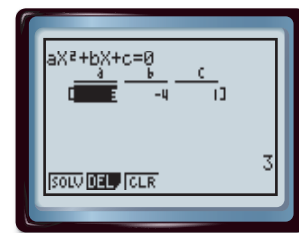
Step 2 From main menu select EQUA.

Step 3 Select **F2** POLY **F1** Degree 2.

Step 4 Enter the coefficients of the trinomial, where $a = 3$, $b = -4$, and $c = 1$.

KEYSTROKES: 3 **EXE** **(-)** 4 **EXE** 1 **EXE** **F1**

The solutions are $x = 1$ or $x = \frac{1}{3}$.



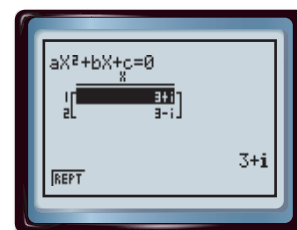
b. $6x^2 + 4x - 3 = 0$

Step 1 Select **F1** **F2** **F1**, then **F1** Degree 2.

Step 2 Enter the coefficients of the trinomial, where $a = 6$, $b = 4$, and $c = -3$.

KEYSTROKES: 6 **EXE** 4 **EXE** **(-)** 3 **EXE** **F1**

The solutions are $x = 0.4484$ and -1.115 .



c. $x^2 - 6x + 10 = 0$.

Step 1 Select **F1** to repeat the process.

Step 2 Enter the coefficients of the equation into the matrix as in the above examples.

Step 3 Choose **F1** SOLV.

The solutions are $x = 3 \pm i$.

Exercises

Solve each equation.

1. $x^2 - 2x - 24 = 0$

2. $-x^2 + 4x - 1 = 0$

3. $0 = -3x^2 - 6x + 9$

4. $x^2 - 2x + 5 = 0$

5. $0 = 4x^2 - 8$

6. $0 = 2x^2 - 4x + 1$

7. $x^2 + 3x + 8 = 5$

8. $25 + 4x^2 = -20x$

9. $x^2 - x = -6$