

Quadratic Formula Program

Below is a program which produces the real solutions (if any) of the quadratic equation

$$ax^2 + bx + c = 0.$$

To start entering the program, choose **PRGM** and then **NEW**. Enter the name of the program using the green letters (listed in the top right corner of each key). Let us call our program **QUADFORM** (you can use another name if you want). After typing **QUADFORM**, press **ENTER**. Then you can start typing the program. To type letters **A**, **B**, **C** etc, use the **ALPHA** key to switch to the “green mode”.

PROGRAM:QUADFORM (press **ENTER** after each line)
: **Prompt A** (for **Prompt** use **PRGM**, select **I/O** menu, then choose **Prompt**)
: **Prompt B**
: **Prompt C**
: **B^2-4AC** → **D** (for →, use **STO** key)
: **(-B+√(D))/(2*A)** → **P**
: **(-B-√(D))/(2*A)** → **Q**
: **Disp P, Q** (for **Disp**, use **PRGM**, select **I/O** menu, then choose **Disp**)

When you finish typing, exit the program using **QUIT** (**2nd** and **MODE**).

Example. Let us solve the equation $2x^2-x-3=0$.

To start the program, press **PRGM**. Choose **EXEC** and **QUADFORM**. If this is the only program you have in your calculator then just press **ENTER**.

Enter 2 for **A**, -1 for **B** and -3 for **C**. The program produces the solutions 1.5 and -1.