

Compute the roots of the equation $ax^2 + bx + c = 0$ and print using three-decimal places. The roots are real $\frac{-b \pm \sqrt{D}}{2a}$ if the discriminant $D = b^2 - 4ac$ is non-negative. If the discriminant is negative, then the roots are complex conjugate $\frac{-b}{2a} \pm \frac{\sqrt{-D}}{2a}i$. The program proceeds in the following steps.

- (a) It accepts the values of a ; b and c from the keyboard.
- (b) No solution if both a and b are zero. The program finishes with appropriate message.
- (c) Linear equation if $a = 0$ but $b \neq 0$ and the root is $-c/b$. The program prints out the root with appropriate message and the program finishes.
- (d) Calculates the discriminant D and determines the corresponding roots.
- (e) Prints out the roots with appropriate message and the program finishes.

Test data and expected output:

Enter a,b,c: 0 2 3

Linear equation: root = -1.500

Enter a,b,c: 1 3 2

The roots are real: -1.000 and -2.000

Enter a,b,c: 2 6 9

The roots are complex: -1.500+1.500i and -1.500-1.500i

Enter a,b,c: 0 0 4

No solution: a & b both zero