

```
1  # Create a Python program that calculates the roots of a quadratic equation using the equation,  
1  x=-b±(sqrt(b**2-4ac))/2a  
2  # You can assume that the equations used will always have two defined roots. (i.e. a≠0 )  
3  # The program should allow the user to input the three variables of the formula, a, b, and c,  
3  and then output the resulting roots.  
4  import math  
5  
6  print('Enter the value of a, b, and c for the equation  $ax^2 + bx + c = 0$ ')  
7  
8  while True:  
9      try:  
10         a = int(input('a: '))  
11         if a == 0:  
12             print('a must not be zero!!')  
13         else:  
14             break  
15     except ValueError:  
16         print('a must be a number!!')  
17  
18  while True:  
19      try:  
20         b = int(input('b: '))  
21         break  
22     except ValueError:  
23         print('b must be a number!!')  
24  
25  while True:  
26      try:  
27         c = int(input('c: '))  
28         break  
29     except ValueError:  
30         print('c must be a number!!')  
31  
32  #print(f'a: {a}')  
33  #print(f'b: {b}')  
34  #print(f'c: {c}')  
35  
36  x1 = (-b + math.sqrt((b ** 2) - (4 * a * c))) / (2 * a)  
37  x2 = (-b - math.sqrt((b ** 2) - (4 * a * c))) / (2 * a)  
38  
39  print(f'The two roots of the quadratic formula are: {x1} and {x2}')
```