

Develop a java program that prints all real solutions to the quadratic equation $ax^2+bx+c=0$. Read in a, b, c and use quadratic formula. If the discriminant is negative, display a message stating, there are no real solutions.

```
import java.util.Scanner;

public class main {
    public static void main(String[] args)
    {
        int d; int a, b, c;
        double r1, r2;
        Scanner ss = new Scanner(System.in);
        System.out.println("a, b, c:");
        a = ss.nextInt();
        b = ss.nextInt();
        c = ss.nextInt();
        d = b*b - 4*a*c;

        if (d > 0)
        {
            r1 = (-b + Math.pow(d, 0.5)) / (2*a);
            r2 = (-b - Math.pow(d, 0.5)) / (2*a);
            System.out.println("R1 = " + r1 + ", R2 = " + r2);
        }
        else if (d == 0)
        {
            r1 = r2 = -b / (2*a);
            System.out.println("R1 = R2 = " + r1);
        }
        else
        {
            System.out.println("There are no real solutions");
        }
    }
}
```

Output: a, b, c:

1
-5
6

Roots $R_1 = 3.0, R_2 = 2.0$

Output: a, b, c:

1
-4
4

$R_1 = R_2 = 2.0$

Output: a, b, c:

1
2
3

There are no real solutions.

$$\frac{N}{26/9/24}$$

```

import java.util.Scanner;
class quad
{
    public static void main(String[] args)
    {
        int d;
        int a,b,c;
        double r1,r2;
        Scanner ss=new Scanner(System.in);
        a=ss.nextInt();
        b=ss.nextInt();
        c=ss.nextInt();
        d=b*b-4*a*c;
        if(d>0)
        {
            r1=(-b+Math.pow(d,0.5))/(2*a);
            r2=(-b-Math.pow(d,0.5))/(2*a);
            System.out.println("r1="+r1+"r2="+r2);
        }
        else if(d==0)
        {
            r1=r2=-b/(2*a);
            System.out.println("r1="+r1+"r2="+r2);
        }
        else
        {
            System.out.println("there are no real solutions");
        }
    }
}

```

```
C:\IBM23cs303>java quad
Error: Could not find or load main class quad
Caused by: java.lang.ClassNotFoundException: quad
```

```
C:\IBM23cs303>javac quad.java
```

```
C:\IBM23cs303>java quad
```

```
1
-5
6
r1=3.0r2=2.0
```

```
C:\IBM23cs303>java quad
```

```
1
-4
4
r1=2.0r2=2.0
```

```
C:\IBM23cs303>java Student
```

```
USN: a0023
```

```
Subject 1: Credits = 4, Marks = 89
```

```
Subject 2: Credits = 3, Marks = 98
```

```
Subject 3: Credits = 2, Marks = 94
```

```
SGPA: 9.56
```

```
C:\IBM23cs303>javac quad.java
```

```
C:\IBM23cs303>java quad
```

```
1
2
6
there are no real solutions
```

```
C:\IBM23cs303>|
```

These improvements make the pr
assistance!