

```
131
132 //Quadratic Equation
133 import java.util.*;
134 class Series{
135     public static void main(String args[]){
136         double a,b,c,d,r1,r2;
137         Scanner in= new Scanner(System.in);
138         System.out.println("Enter the three coefficients according to decreasing power of x:\n");
139         a=in.nextDouble();
140         b=in.nextDouble();
141         c=in.nextDouble();
142         System.out.println("a="+a+" b="+b+" c="+c);
143         d=b*b-4*a*c;
144         if(d>0){
145             System.out.println("Roots are real and distinct.");
146             r1=(-b+Math.sqrt(d))/(2*a);
147             r2=(-b-Math.sqrt(d))/(2*a);
148             System.out.println("r1= "+r1+" r2="+r2);
149         }
150         else if(d==0){
151             System.out.println("Roots are real and equal.");
152             r1=(-b)/(2*a);
153             System.out.println("r= "+r1);
154         }
155         else if(d<0){
156             System.out.println("Roots are imaginary.");
157         }
158     }
159 }
```

Microsoft Windows [Version 10.0.19041.508]
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C:\Users\Shreshtha Aggarwal>cd desktop/java

C:\Users\Shreshtha Aggarwal\Desktop\java>javac Series.java

C:\Users\Shreshtha Aggarwal\Desktop\java>java Series

Enter the three coefficients according to decreasing power of x:

1

2

1

a=1.0 b=2.0 c=1.0

Roots are real and equal.

r= -1.0

C:\Users\Shreshtha Aggarwal\Desktop\java>java Series

Enter the three coefficients according to decreasing power of x:

11

2

3

a=11.0 b=2.0 c=3.0

Roots are imaginary.