



1_quadratic.java



```
1  import static java.lang.Math.sqrt;
2  import java.util.Scanner;
3  class Quadratic{
4      public static void main(String args[]){
5          Scanner s1=new Scanner(System.in);
6          System.out.println("Enter a, b and c in ax^2+bx+c=0");
7          int a=s1.nextInt();
8          int b=s1.nextInt();
9          int c=s1.nextInt();
10         int d=b*b-4*a*c;
11         double x1,x2;
12         if(d>0){
13             x1=(-b+sqrt(d))/(2*a);
14             x2=(-b-sqrt(d))/(2*a);
15             System.out.println("The solutions are real");
16             System.out.printf("x1=%.4f",x1);
17             System.out.printf("\nx2=%.4f",x2);
18         }
19         else if(d==0)
20         {
21             double x=2*a;
22             x1=-b/x;
23             System.out.println("The solutions are real and equal");
24             System.out.println("x1=x2="+x1);
25         }
26         else
27             System.out.println("There exists no real solutions");
28     }
29 }
30
31
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Command Prompt

```

C:\Program Files\Java\bin\basic>javac 1_quadratic.java
'javac' is not recognized as an internal or external command,
operable program or batch file.

```

```

C:\Program Files\Java\bin\basic>set path="C:\Program Files\Java\bin"

```

```

C:\Program Files\Java\bin\basic>javac 1_quadratic.java

```

```

C:\Program Files\Java\bin\basic>java Quadratic
Enter a, b and c in ax^2+bx+c=0
4 4 1
The solutions are real and equal
x1=x2=-0.5

```

```

C:\Program Files\Java\bin\basic>javac 1_quadratic.java

```

```

C:\Program Files\Java\bin\basic>java Quadratic
Enter a, b and c in ax^2+bx+c=0
2 4 5
There exists no real solutions

```

```

C:\Program Files\Java\bin\basic>javac 1_quadratic.java

```

```

C:\Program Files\Java\bin\basic>java Quadratic
Enter a, b and c in ax^2+bx+c=0
2 4 1
The solutions are real
x1=-0.2929
x2=-1.7071
C:\Program Files\Java\bin\basic>

```