[1.Develop a Java program that prints all real solutions to the quadratic equation ax2+bx+c = 0. Read in a, b, c and use the quadratic formula. If the discriminate b2 -4ac is negative, display a message stating that there are no real solutions.

```
import java.math.*;
 class solution{
double a,b,c;
   solution(double i,double j,double k){        a=i;b=j;c=k;
   }     void sol(){
       double D=(b*b-4*a*c);         double
x1,x2;         if(D<0){             x1=-b/2*a;
x2=(D/2*a);
           System.out.println("IMAGINARY ROOT ARE"+"
"+x1+"+i"+"("+x2+")"+" AND "+x1+"-i"+"("+x2+")"+"\n");
       }
       else if(D==0){

           x1=x2=(-b/2*a);
           System.out.println("THE SOLUTION ARE REAL AND EQUAL"+" "+x1+"
"+x2+"\n");         }
else{
           x1=(-b+Math.sqrt(D))/2*a;             x2=(-b-Math.sqrt(D))/2*a;
           System.out.println("THE SOLUTIONS ARE"+" "+x1+" "+x2+"\n");
       }
   }
}
class week1{
   public static void main(String args[]){        solution s1=new
solution(1,2,-3);         solution s2=new solution(1,2,1);
solution s3=new solution(1,1,1);         s1.sol();         s2.sol();
s3.sol();
   }
}
```

```
THE SOLUTIONS ARE 1.0 -3.0

THE SOLUTION ARE REAL AND EQUAL -1.0 -1.0

IMAGINARY ROOT ARE -0.5+i(-1.5) AND -0.5-i(-1.5)


Process finished with exit code 0
```