```
Week-1
Roots of Pradratic equations
import java. util. Scanner;
class roots d
     public static void (main (string [) args) &
         Scanner sonew Scanner (System. in).
         System. out . println ("Enter three number");
         double a = s.nextDouble();
         double b= sinext Double 1);
          double c = b.next Double ();
          double determinant = (b*b) - (u*a*c).
          double egirt = Math. egirt (determinant);
        i) (determinant > 0) d
            double firstroot = (-b+sqrt) / (2*a).
            double secondroot = (-b+-sqrt) /(2*a):
            System. out. println ("Roots are different and real);
           System. out. prints ("Roots are = 10. 2) and 1. 25")
                                  firstroot, second root);
        I close of (determinant == 0) {
           System.out. println ("Roots are real & equal"):
          system.out.print/(" Root is = 1.2)", (-5+29/+)/(2ta))
        7 else &
            double realpart = - 51 (2*a);
            double imaginary part = Math. syrt (determinant)
```

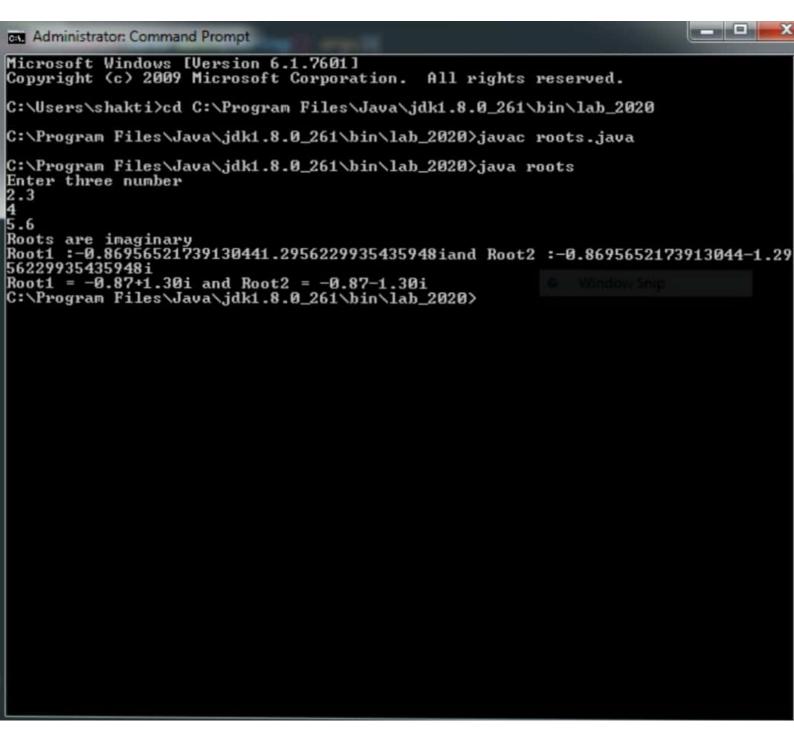
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```
System. out. println ("Roots are imaginary");
Systam.out. printy (" Roof 1 = 11.2) + 11.2); and
                   Root 2 = -1.21 - 4.21;
                   realpart, imaginary part,
                    realpart, imaginary part);
              Algorithm
i) Inpot value a,b,c
    Calculate determent = 5.6 - utate and
      sgroot of determinant.
 ii) (determinant > 0)
      Roots are real & different
       r, = (-b+sqrt)/(2*a);
       rg = (-60-byrt) / (3* a):
 is]. else of (deterominant= 0)
          Roots are equal;
         r, = + (-b + kg/rt) ( ( ) * a).
   iv]. else
            Roots are imaginary.
        Real part = - 6 (3*a)
        imaginary part = Math. syrt(-determinant
```

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18, Root 1 = 1.2/+1.2/;
Root 2 = 1.2/-1.2/;

Print R. & R2. vi) End.



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