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LAB - 1

Github rep - lab

↳ extra

Name & USN

source code & o/p ss

```
import java.util.Scanner;
import java.lang.Math;

class Quadratic
{
  int a, b, c;
  double r1, r2, d1, d, re, x, y;
  Scanner s = new Scanner(System.in);

void getval()
{
Scanner
sout("Enter coeff a:");
a = s.nextInt();

sout("Enter coeff b:");
b = s.nextInt();

cout("Enter coeff c:");
c = s.nextInt();
;
```

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```
void calc()
{
  if (a==0)
  {
   sout ("Not quadratic. Reinter a : ");
    a = s.nextInt();
  }

d1 = (b*b) - (4*a*c);
d = Math.sqrt(d1);

if (d>0)
{
  SOP("Real Distinct");
  r1 = (-b-d) / (2*a);
  r2 = (-b+d) / (2*a);
  SOP("r1 = " + r1 + " r2 = " + r2);
}

else if (d==0)
{
  SOP("Real equal");
   r = (-b) / (2*a);
   SOP("r1 = r2 = " + r);
}

else
{
  SOP("Imaginary root");
    x = (-b) / (2*a)
    y = Math.sqrt((-d) / (2*a));
    SOP(x + "i" + y);
}
}
```

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```
class a
{
  PSVM (String args[])
  {
    SOP ("Name : Ananya \n USN: 1BM23CS034");
    Quadratic q = new Quadratic();
    q = getval();
    q = calc();
  }
}
```

O/P:

Name : Ananya N Gowda
USN : 1BM23CS034

case 1:

a = 1
b = 6
c = 5

Real distinct roots
r1 = -5.0 r2 = -1.0

case 2:

a = 1
b = -2
c = 1

Real equal roots:
r1 = r2 = 1.0

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case 3:

a = 1
b = 3
c = 10

Imaginary roots
-1.5 i 2.7838...