~~Defn~~ Develop a Java prog. that prints all real solution of the quad. eq. $ax^2+bx+c=0$. Read in a, b, c and use the quad. formula.

```
import java.util.Scanner;
class Quadratic
{
    int a,b,c;
    double x1, x2, d;
    void getd()
    {
        Scanner s= new Scanner(System.in);
        System.out.println("Enter the coefficients of
                                    a, b, c");
        a= s.nextInt();
        b= s.nextInt();
        c= s.nextInt();
    }
    void compute()
    {
        while(a==0)
        {
            System.out.println("not a quadratic");
            System.out.println("Enter a non zero
                                    value for a:");
            Scanner s= new Scanner(System.in);
            a= s.nextInt();
        }
        d= b*b -4*a*c;
        if(d==0)
        {
            x1= (-b)/(2*a)
            System.out.println("Root are real and
                                    equal");
            System.out.println("Root 1 = root 2= "+x1);
        }
```

```
else if (d>0)
{
    x1 = ((-b)+(Math.sqrt(d)))/(double)(2*a);
    x2 = ((-b)-(Math.sqrt(d)))/(double)(2*a);
    System.out.println("Roots are real and distinct");
    System.out.println("Root1 = " + x1 + "Root2 = " + x2);
}
else if (d<0)
{
    System.out.println("Roots are Imaginary");
    x1 = (-b)/(2*a);
    x2 = Math.sqrt(-d)/(2*a)
    System.out.println("Root1 = " + x1 + "+i" + x2);
    System.out.println("Root2 = " + x1 + "-i" + x2);
}
}
class QuadraticMain
{
public static void main(String args[])
{
    Quadratic q = new Quadratic();
    q.getd();
    q.Compute();
}
}
```

output

```
Enter the coefficients of a,b,c
-2
-1
```

roots are equal
root1 = root2 = -1

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