

// Quadratic Equations

import java.util.Scanner;

class Equation

{

```

    public static void main (String args[])
    {

```

```

        int a, b, c;

```

```

        double d;

```

```

        double x1 = 0.0, x2 = 0.0;

```

```

        Scanner sc = new Scanner (System.in);

```

```

        System.out.println ("Enter a, b & c of
                               QB :  $ax^2 + bx + c = 0$ ");

```

```

        a = sc.nextInt();

```

```

        b = sc.nextInt();

```

```

        c = sc.nextInt();

```

```

if d = b*b - 4*a*c;

```

```

        x1 = (-b + Math.sqrt(d)) / (2*a);

```

```

        x2 = (-b - Math.sqrt(d)) / (2*a);

```

```

        if (d > 0)
        {

```

```

            System.out.println ("real & distinct");

```

```

            System.out.printf ("solution : %.2f", x1);

```

```

            System.out.printf ("      %.2f", x2);
        }

```

```

        if (d == 0)
        {
            x1 = x2 = -b / (2*a);

```

```

            System.out.println ("real & equal");

```

```

            System.out.printf ("solution : %.2f", x1);

```

```

            System.out.printf ("      %.2f", x2);
        }

```

```

        if (d < 0)

```

```

            System.out.println ("no real solutions");
        }
    }
}

```