

Quadratic Equation

Code:-

```

public class quad {
    public static void main (String[] args) {

        double a = 2.3, b = 4, c = 5.6;
        double root1, root2;

        double determinant = b*b - 4*a*c;

        if (determinant > 0) {
            root1 = (-b + Math.sqrt(determinant)) / (2*a);
            root2 = (-b - Math.sqrt(determinant)) / (2*a);
            System.out.format ("root1 = %.2f and root2 = %.2f",
                                root1, root2);
        }

        else if (determinant == 0) {
            root1 = root2 = -b / (2*a);
            System.out.format ("root1 = root2 = %.2f", root1);
        }

        else {
            double realPart = -b / (2*a);
            double imaginaryPart = Math.sqrt (-determinant) /
                                   (2*a);
            System.out.format ("root 1 = %.2f + %.2fi and
                                root2 = %.2f - %.2fi", realPart,
                                imaginaryPart, realPart, imaginaryPart);
        }
    }
}

```