Java Week 1 and 2:

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Code:

```
import java.util.Scanner;

public class QuadraticEquations{
   public static void main(String[] arg) {
      Scanner scanner = new Scanner(System.in);

      System.out.print("Enter a: ");
      double a = scanner.nextDouble();
      System.out.print("Enter b: ");
      double b = scanner.nextDouble();
      System.out.print("Enter c: ");
      double c = scanner.nextDouble();

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

      if (d > 0) {
         double root1 = (-b + Math.sqrt(d)) / (2 * a);
         double root2 = (-b - Math.sqrt(d)) / (2 * a);

         System.out.println("Real Roots");
         System.out.println("Root 1: " + root1);
         System.out.println("Root 2: " + root2);
      }
         else if (d == 0) {
         double root = -b / (2 * a);
```

```
            System.out.println("Roots are real and equal");
            System.out.println("Root: " + root);
        }
            else {
            System.out.println("Roots are complex");
        }

        scanner.close();
    }
}
```

Output: