

Java Fundamentals Mini Exam — Teacher Version

Includes complete solutions and explanations.

```
public class ExpressionsExamSolution {

    public static void main(String[] args) {

        // QUESTION 1
        int x = 5, y = 10, z = 15;
        System.out.println("x = " + x + ", y = " + y + ", z = " + z);

        // QUESTION 2
        x++; // post-increment
        --y; // pre-decrement
        System.out.println("After increment/decrement: x = " + x + ", y = " + y);

        // QUESTION 3
        int sum = x + y + z;
        double average = sum / 3.0;
        System.out.println("Sum = " + sum + ", Average = " + average);

        // QUESTION 4
        int result = x++ + --y + z * 2;
        System.out.println("Result = " + result);
        // Explanation: pre/post operators change timing of updates to x/y.

        // QUESTION 5
        boolean isGreater = sum > average * 3;
        System.out.println("Is sum greater than three times average? " + isGreater);

        // QUESTION 6
        if (x > y) {
            System.out.println("x is greater");
        } else if (x == y) {
            System.out.println("x and y are equal");
        } else {
            System.out.println("y is greater");
        }

        // QUESTION 7
        System.out.println((x + y > z) && (z % 2 == 1));
        // This checks if the sum of x and y is greater than z AND z is odd.

        System.out.println("\n--- End of Exam ---");
    }
}
```