Java Fundamentals Mini Exam

Topics: Variables, Expressions, Increment/Decrement, Boolean Logic

Instructions:

- Open this project in IntelliJ IDEA.
- Work only inside the main() method.
- Read each question carefully and write your code in the space provided.
- Add comments to explain your reasoning.

QUESTION 1: Basic Variables

Declare three integer variables: x, y, and z. Initialize x with 5, y with 10, and z with 15. Print their values with clear labels.

// Write your code below:

QUESTION 2: Increment and Decrement

Use the increment (++) and decrement (--) operators: Increment x by 1 (post-increment), decrement y by 1 (pre-decrement), and print their values.

// Write your code below:

QUESTION 3: Arithmetic Expressions

Create two new variables: sum = x + y + z, average = sum / 3.0. Print both values.

// Write your code below:

QUESTION 4: Combined Expression

Write: result = x++ + --y + z * 2. Print 'Result = ' and explain why the result has that value.

// Write your code below:

QUESTION 5: Boolean Expression

Create boolean isGreater = (sum > average * 3). Print result.

// Write your code below:

QUESTION 6: Logic with Conditions

If x > y print 'x is greater'; else if equal print 'x and y are equal'; otherwise print 'y is greater'.

// Write your code below:

QUESTION 7: Challenge — Expressions in One Line

Print result of (x + y > z) && (z % 2 == 1) and explain output in comment.

// Write your code below:

--- End of Exam ---