



Introduction to Programming with Java

Class: ComplexNumber.java

Score: ★★☆☆☆

Prerequisites: ACM Task Force Commands

Description:

This project involves two classes Complex.java and ComplexCalculator.java. The ComplexCalculator program is used to test the Complex class. The program creates two random complex numbers; randomly adds, subtracts or multiplies them, and checks the correctness of the result. Your task is to implement the methods of the Complex class.

- Hint: Complex numbers are added, subtracted and multiplied as follows:

Addition

$$(A + Bi) + (C + Di) = (A+C + (B +D)i)$$

Subtraction

$$(A + Bi) - (C + Di) = (A-C + (B -D)i)$$

Multiplication

$$(A + Bi) \times (C + Di) = (A \times C - B \times D + (A \times D - B \times C)i)$$

Sample Run:

```
(79+56i) + (60+45i) = 139 + 105i (PASSED)
```

¹ Don't change any lines below **Do not modify functions below this line** comment.