

Homework 7

CSC-121, Fall 2025

Submission Instructions: Create a single text file for your answers (Use .txt or .pdf) with your name and ID number at the top. Include code written for any programs, and type-written answers to non-coding questions. Submit the file on Canvas to complete the assignment. You may work in groups or use genAI help, but written answers must be in your own words.

Q0. CodePath Mid-Semester Survey

How do you feel that the semester has been going so far? Please let us know in the mid-semester survey. This will help the teaching staff by providing feedback on what we could do to make the course better.

Survey Link: <https://www.surveymonkey.com/r/cir-fall25-mc>

Q1. Multiple Choice & True/False

Select only the best answer for each question. There is only one correct answer. You do not need to explain your choice.

1. This type of method does not return a value.
 - a. null
 - b. void
 - c. empty
 - d. anonymous

2. This appears at the beginning of a method definition.
 - a. semicolon
 - b. parentheses
 - c. body
 - d. header

3. The body of a method is enclosed in _____.
 - a. curly braces {}
 - b. square brackets []
 - c. parentheses ()
 - d. quotation marks " "

4. A method header can contain _____.
 - a. method modifiers
 - b. the method return type
 - c. the method name
 - d. a list of parameter declarations
 - e. all of these
 - f. none of these

5. A value that is passed into a method when it is called is known as a(n) _____.

- a. parameter
- b. argument
- c. signal
- d. return value

6. A variable that receives a value that is passed into a method is known as a(n) _____.

- a. parameter
- b. argument
- c. signal
- d. return value

7. or False

A parameter variable's scope is the entire program that contains the method in which the parameter is declared.

8. True or False

When an object, such as a String, is passed as an argument, it is actually a reference to the object that is passed.

9. True or False

When code in a method changes the value of a parameter, it also changes the value of the argument that was passed into the parameter. (*NOTE: This question is a bit tricky!*)

10. True or False

It is possible for one method to access a local variable that is declared in another method.

11. True or False

You must have a return statement in a value-returning method.

Q2. Cube

A program contains the following method definition:

```
Java
public static int cube(int num)
{
    return num * num * num;
}
```

Write a statement that passes the value 4 to this method and assigns its return value to a variable named result.

Q3. Times Ten

Write a method named timesTen. The method should accept a double argument, and return a double value that is ten times the value of the argument.

Q4. String Return

Write a method named getName that prompts the user to enter his or her first name, and then returns the user's input. Print the name in your main method.

Q5. Even/Odd counter

You can use the following logic to determine whether a number is even or odd:

```
Java
if ((number % 2) == 0)
{
    // The number is even.
}
else
{
    // The number is odd.
}
```

Write a program with a method named isEven that accepts an int argument. The method should return true if the argument is even, or false otherwise. The program's main method should use a loop to generate 100 random integers. It should use the isEven method to determine whether each random number is even, or odd. When the loop is finished, the program should display the number of even numbers that were generated, and the number of odd numbers.