# Exercises

**LEVEL ONE**

1. Which of the following options correctly declares an integer variable named "count" in Java?
   - int count = 5.0;
   - int count = "5";
   - int count = 5;
   - int count = "five";

2. What is the output of the following code?:
   String text = "Hello, World!";
   System.out.println(text.length());
   - 13
   - 11
   - 12
   - 10

3. What is the correct syntax to define a method named "addNumbers" that takes integers as parameters and returns their sum?
   - void addNumbers(int a, int b) {return a + b;}
   - int addNumbers(int a, intb) {return a + b;}
   - int addNumbers(int a, int b) {Systemout.println(a + b);}
   - addNumbers(int a, int b) {return a + b;}

4. What is the correct way to print "Hello, World!" to the console in Java?
   - print("Hello, World!");
   - System.out.println("Hello, World!");
   - Console.write("Hello, World!");
   - System.out.prinln("Hello, World!");

**LEVEL TWO**

1. What is the output of the following code? :
   int [] numbers = {1, 2, 3, 4, 5};
   for (int i = 0; i < numbers.length; i++) {
           System.out.println(numbers[i] + " ");
   }
   - 1 2 3 4 5
   - 5 4 3 2 1
   - 1 2 3 4
   - 5 4 3 2

2. Which of the following options correctly initializes a two-dimensional array with 3 rows and 4 columns?
   - int[][] array = new int[3][4];
   - int[][] array = new int[4][3];
   - int[][] array = new int[3, 4];
   - int[][] array = new int[4][4];

3. What is the output of the following code?
   int x = 5;
   System.out.println(++x + x++);
   - 11
   - 12

- 10
- 13

4. What is the output of the following code?
   String str = "Java";
   str = str.substring(0, 2) + "++" + str.substring(2);
   System.out.println(str);
   - Jav++a
   - Jav++
   - J++ava
   - Java++

5. Which of the following options correctly defines a class named "Circle" with a private instance variable "radius" and a public method "getArea()" that returns the area of the circle?
a) class Circle {
       private int radius;
       public double getArea() {
             return Math.PI * radius * radius;
       }
   }

b) class Circle {
       public int radius;
       public double getArea() {
             return Math.PI * radius * radius;
       }
   }

c) class Circle {
       private double radius;
       private double getArea() {
             return Math.PI * radius * radius;
       }
   }

d) class Circle {
       private int radius;
       private int getArea() {
             return Math.PI * radius * radius;
       }
   }

**LEVEL THREE**
1. What is the output of the following output?
   String str = "Java";
   str.concat(" is").concat(" awesome");
   System.out.println(str);
   - Java is awesome
   - is awesome
   - Java
   - Error

2. Which of the following options correctly defines an interface named "Resizable" with a method named "resize" that takes an integer as a parameter and does not return any value?
- interface Resizable {void resize(int size);}
- interface Resizable{int resize(int size);}
- interface Resizable {void reisze();}
- interface Resizable {int resize();}

3. What is the output of the following code?
```
int [] numbers = {1, 2, 3, 4, 5};
int sum = 0;
for (int number: numbers) {
        sum += number
        if (sum > 5) {
                break;
        }
}
System.out.println(sum);
```
- 3
- 6
- 15
- 10

6. What is the output of the following code?
```
public class Test {
        public static void main (String[] args) {
                try {
                        int result = 10 / 0;
                        System.out-println(result);
                } catch (ArithmeticException e) {
                        System.out.println("An arithmetic exception occurred");
                }
        }
}
```

- An arithmetic exception occurred
- 0
- 10
- Runtime error: Division by zero