

**CLASS TEST 4**

Examiners [Mr Kambale &amp; Mr Kgoete]

**Question 1.**

Write a java program that will print from number 1 to 7. Make use of any loop structure of your choice. (If no loop is used, no mark will be given)! Then your code (loop) should be able to add all the numbers together. Finally display the sum at the end.

Your output should look like this:

```
This is number 1
This is number 2
This is number 3
This is number 4
This is number 5
This is number 6
This is number 7
The sum of all the numbers is 28
```

**Question 2.**

Your younger sibling who is doing grade 2 requests that you help them with Maths, especially understanding multiplication. You then have this cool idea to write a code that will randomly generate questions for them to do. Write a code with a loop that that will be doing the following:

- Randomly generating 2 numbers in the range 1 to 15.
- Prompt to the user the "num1 × num2 = ." so that the user can enter the answer.
- If the answer is correct, Prompt to the user 'Correct-' then request if they wish to do another calculation or not.
- If the answer is not correct, Prompt to the user 'Wrong-' then request if they wish to do another calculation or not.
- As the user provide the answers to the calculations, your code should be counting the correct answers and the wrong answers.
- When the use decides to stop, prompt to the user the number of questions they got correct and the number of questions they got wrong.

Your output should look like this:

```
CALCULATIONS START...
-----
3 x 13 = 33
Wrong - Continue: <Y>, Stop:<N>: Y
-----
7 x 16 = 77
Wrong - Continue: <Y>, Stop:<N>: Y
-----
7 x 9 = 63
Correct - Continue: <Y>, Stop:<N>: Y
-----
16 x 1 = 16
Correct - Continue: <Y>, Stop:<N>: Y
-----
7 x 7 = 47
Wrong - Continue: <Y>, Stop:<N>: Y
-----
9 x 10 = 90
Correct - Continue: <Y>, Stop:<N>: N
-----
You got 3 questions correct and 3 questions Wrong!
```

## MEMORANDUM

### Question 1 – Answer Option 1.

```

1 //CT4_Q1
2 import java.util.Scanner;
3 import java.util.Random;
4
5 public class CT4_Q1
6 { //start class
7     public static void main(String[] args)
8     { //start main method
9
10         int iSum=0; ✓
11         System.out.println("\n\n");
12         for(int iNum = 1; iNum<=7; iNum++) ✓✓✓
13         {
14             System.out.println("This is number "+iNum); ✓
15
16             iSum = iSum + iNum; ✓✓
17         }
18
19         System.out.println("The sum of all the numbers is "+iSum); ✓
20     }
21 }

```

### Question 1 – Answer Option 2.

```

1 //CT4_Q1
2 import java.util.Scanner;
3
4 public class CT4_Q1
5 { //start class
6     public static void main(String[] args)
7     { //start main method
8
9         int iSum=0; ✓
10        int iNum = 1; ✓
11
12        System.out.println("\n\n");
13        while(iNum<=7) ✓
14        {
15            System.out.println("This is number "+iNum); ✓
16
17            iSum = iSum + iNum; ✓
18
19            iNum++; ✓✓
20        }
21
22        System.out.println("The sum of all the numbers is "+iSum); ✓
23    }
24 }
25

```

## Question 2

```

1  //CT4_Q2
2  import java.util.Scanner;
3  import java.util.Random;
4
5  public class CT4_Q2_2
6  { //start class
7      public static void main(String[] args)
8      { //start main method
9          Scanner keyboard = new Scanner(System.in);
10         Random rand = new Random(); ✓
11
12         //Declarations
13         int iCompNum_1, iCompNum_2; ✓
14         int iResult; ✓
15         int iCorrect = 0, iWrong = 0; ✓
16         char cAnswer='Y'; ✓
17
18         System.out.println("CALCULATIONS START...");
19         //System.out.println("-----");
20         do
21         {
22             System.out.println("-----");
23             //User Input Guess
24             iCompNum_1 = rand.nextInt(16) + 1; ✓ //1-15
25             iCompNum_2 = rand.nextInt(16) + 1; ✓ //1-15
26
27             System.out.print(iCompNum_1+" x "+iCompNum_2+" = "); ✓
28             iResult = keyboard.nextInt(); ✓
29
30             if ( iResult == (iCompNum_1*iCompNum_2)) ✓
31             {
32                 iCorrect++; ✓
33                 System.out.print("Correct - Continue: <Y>, Stop:<N>: "); ✓
34                 cAnswer = Character.toUpperCase(keyboard.next().charAt(0)); ✓
35             }
36             else
37             {
38                 iWrong++; ✓
39                 System.out.print("Wrong - Continue: <Y>, Stop:<N>: "); ✓
40                 cAnswer = Character.toUpperCase(keyboard.next().charAt(0)); ✓
41             }
42         }while(cAnswer == 'Y'); ✓
43
44         System.out.println("-----");
45         System.out.println("You got "+iCorrect+" questions correct and "+iWrong+" questions Wrong!"); ✓
46     }
47 }

```