

CSE 1321 CSE 1321 Test 2 B

Rutvik Dhira Marakana

TOTAL POINTS

97 / 90

QUESTION 1

1 Output from For Loops 15 / 15

+ **0 pts** incorrect answer, output should be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0

✓ + **15 pts** correct

+ **12 pts** correct numbers showing but your rows and columns are inverted i.e. row 1 should be column 1, row 2 should be column 2, row 3 should be column 3, and row 4 should be column 4. (-3pts)

+ **12 pts** correct numbers showing but your columns should be rows. i.e. column 1 should be row 1, column 2 should be row 2, column 3 should be row 3, and column 4 should be row 4. (-3pts)

+ **12 pts** one column too many, column 5 should not exist (-3pts)

+ **12 pts** one row too many, row 5 should not exist (-3pts)

+ **9 pts** missing a 4th column (-3pts) and missing a 4th row (-3pts). output should be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0

+ **12 pts** did not include the printline, should have 4 rows not 1 row

+ **3 pts** incorrect answer, output should be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0

+ **9 pts** incorrect answer, the question asks for "exact" output, which should be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0. Your output is not exact (-3pts) and has no new-lines (should have 4 separate lines of output (-3pts)).

+ **12 pts** too many printlines, should have 4 rows not 1 column (-3pts), output should be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0

+ **12 pts** correct numbers showing but your rows and columns are inverted. You should have a 4 x 4 matrix not one long row (-3pts). Correct output should

be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0

+ **3 pts** not showing "exact output" (-3pts). Also, missing a 4th column and missing a 4th row. output should be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0 (-6pts)

+ **9 pts** missing a 4th row (-3pts). and did not include the printline, should have 4 rows not 1 row (-3pts). Correct output should be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0.

+ **8 pts** missing a 4th column (-3pts) and missing a 4th row (-3pts). output should be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0. comma's should be tabs (-1pts).

+ **8 pts** missing a 4th column (-3pts) and missing a 4th row (-3pts). Also, not showing "exact" output (-2 pts). Correct output should be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0

+ **12 pts** missing the 4th row (-3pts). Correct output should be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0

+ **8 pts** incorrect answer, the question asks for "exact" output, which should be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0. Your output is not exact (-4pts) and has no new-lines (should have 4 separate lines of output (-3pts)).

+ **12 pts** one row too many, row 5 should not exist (-3pts). output, which should be row 1: 0 1 2 3, row 2: -1 0 1 2, row 3: -2 -1 0 1, row 4: -3 -2 -1 0.

QUESTION 2

2 Sum While Loop Pseudocode 15 / 15

✓ + **1 pts** variable declared to hold sum and initialized

✓ + **3 pts** WHILE used

✓ + **1 pts** END WHILE included

✓ + **2 pts** Correct condition for WHILE to continue

looping

- ✓ + 3 pts Correct update of sum inside of loop
- ✓ + 2 pts Incremented counter inside of loop
- ✓ + 3 pts Correct logic for if A > B to print out 0

QUESTION 3

3 myMethod Output 20 / 20

- ✓ + 5 pts Output 0 1 correctly
 - + 2.5 pts Output 0 1 with extra output (new line, numbers or characters)
- ✓ + 2.5 pts Put newline after first method call
- ✓ + 5 pts Output 3 4 with space
 - + 2.5 pts Output 3 4 with extra output (new line, numbers or characters)
- ✓ + 2.5 pts Put newline after second method call
- ✓ + 5 pts Output 6
 - + 2.5 pts Output 6 with extra output (numbers or characters)
 - + 0 pts Incorrect/Unattempted

QUESTION 4

4 PrintNumbers For Loop Pseudocode 20 / 20

- ✓ + 2 pts An integer variable (e.g., N) declared and initialize to 8
- ✓ + 2 pts An integer counter (index) variable (e.g., I) declared and initialize it appropriately
- ✓ + 2 pts Correct condition to continue the FOR loop (e.g., an index variable I initialized to 2 and ended to be 8)
- ✓ + 2 pts Correct use of PRINT method with some spaces (e.g., PRINT N + " ")
- ✓ + 2 pts Correct update of the variable N inside of loop (e.g., N = N + 2*I)
- ✓ + 2 pts Putting the METHOD PrintNumbers and END PrintNumbers on place
- ✓ + 2 pts Putting the FOR and ENDFOR on place
- ✓ + 6 pts Print the series properly as 8 12 18 26 36 48 62
 - + 0 pts Incorrect attempt

QUESTION 5

5 CheckLetter Method Pseudocode 20 / 20

- ✓ + 4 pts parameters correctly defined
- ✓ + 5 pts correct condition to check for vowel
- ✓ + 5 pts correct message
- ✓ + 1 pts METHOD
- ✓ + 1 pts END METHOD
 - + 2 pts IF
 - + 2 pts END IF
- ✓ + 2 pts CASE
- ✓ + 2 pts END CASE
 - + 0 pts Blank submission.
 - + 0 pts Submission does not meet any rubric requirements.

QUESTION 6

6 Curve 7 / 0

- ✓ + 7 pts Correct

CSE 1321 Lecture Test 2 Cover Sheet

- 1) DO NOT TURN THE PAGE UNTIL TOLD TO BEGIN THE TEST.
- 2) Please print (legibly) your name, KSU NetID and KSU ID# on each page of the exam
- 3) Student has 45 minutes to complete the exam
- 4) Student MAY NOT use notes or book
- 5) Student should write their responses in Pseudocode in the Answer boxes on the test paper
- 6) Student is not allowed any electronic devices that can be used to look up or store answers. A standard calculator (non-graphing is acceptable)
- 7) Partial credit will be given.

Student Name: Rutvik Marakana

Student KSU ID# 000844768

Student NetID: rmarakana

Student Signature: Rutvik

Date: 10/15/2018

Student Name: Rutvik Marakana NetID: amarakam KSU ID# 000844768

Q1 (15 points): What is the exact output of the following pseudocode segment?

```
FOR I from 1 to 4
  FOR J from 1 to 4
    PRINT((J-I) + "\t")
  ENDFOR
PRINTLINE()
ENDFOR
```

Answer:

```
0 1 2 3
-1 0 1 2
-2 -1 0 1
-3 -2 -1 0
```

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Q2 (15 points): Write pseudocode while loop to sum all the values between 2 integers (A & B, input by the user), including A and B, and print the resulting sum. A must be less than B, otherwise print 0.

Answer:

```
READ user-input values for two integers
int A ← user-input of first integer
int B ← user-input of second integer
int sum ← 0
IF (A < B)
    WHILE (A ≤ B)

        sum ← sum + A
        A++
    END WHILE
    PRINT "Sum of all values between " + A + " and " + B + " is "
    + sum
ELSE
    PRINT 0
ENDIF
END IF
```

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Q3 (20 points): What is the exact output of the following pseudocode segment?

```
METHOD MAIN
    CALL myMethod (0,2)
    CALL myMethod (3,5)
    CALL myMethod (6,7)
END MAIN
```

```
METHOD myMethod(A,B)
BEGIN
    WHILE (A < B)
        PRINT (A + " ")
        A ← A + 1
    ENDWHILE
    PRINTLINE();
END myMethod
```

Answer:

```
0 1
3 4
6
```

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Q4 (20 points): Write a **pseudocode** method, called *PrintNumbers*, that prints out the following sequence of numbers. The method must use a **for-loop** to print the outputs.

HINT: "To get started: what's the pattern from number X to $(X+1)$? Does it apply to the next pair of numbers?"

8 12 18 26 36 48 62

Answer:

```
METHOD PrintNumbers()  
BEGIN  
  int a ← 8  
  FOR(int i ← 0; i ≤ 6; i ← i++)  
    a ← a + (2 * i)  
    PRINT a + " "  
    a ← a + 2  
  END FOR  
END PrintNumbers()
```


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Q5 (20 points): Write a method, called *CheckLetter*. The method receives a letter as a parameter and returns whether the letter is a lowercase vowel (a, e, i, o, u) or not. Sample outputs are:

The entered letter is: a
a is a vowel.

The entered letter is: b
b is a vowel.

Answer:

```
METHOD CheckLetter (char c)
BEGIN
    PRINT "The entered letter is:" + c
    char letter ← c
    CASE letter OF
        a: PRINT "a is a vowel"
            BREAK
        e: PRINT "e is a vowel"
            BREAK
        i: PRINT "i is a vowel"
            BREAK
        o: PRINT "o is a vowel"
            BREAK
        u: PRINT "u is a vowel"
            BREAK
    default: PRINT letter + " is not a vowel"
    END CASE
    RETURN letter
END CheckLetter
```