ENGG1340 Computer Programming II

**Module 3 Checkpoint Exercise**

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**Instructions:**

For each single question or each group of questions in the Checkpoint exercise, please type your answer right after the question in this Word document.

**Checkpoint 3.1 (Please submit your answer to Moodle)**

What is the screen output when each of the following C++ statements is performed? Assume x = 4 and y = 6. You should write “no screen output” if no output is displayed for the statement.

1. cout << y**;**

ans: 6

1. cout << x -y;

ans: -2

1. cout << "y";

ans: y

1. cout << "x = " << x;

ans: x = 4

1. cout << x \* y << " = " << y \* x;

ans: 24 = 24

1. p = x - y;

ans: no screen output

1. // cout << "x - y = " << x - y;

ans: no screen output

**Checkpoint 3.2 (Please submit your answer to Moodle)**

Given the algebraic equation y = ax3 - 12, which of the following are correct statements for this equation?

a) y = a \* x \* x \* x -12;

b) y = a \* x \* (x - 12);

c) y = a \* (x \* x) \* (x -12);

d) y = a \* x \* (x \* x) - 12;

e) y = a \* ( x \* x \* x ) -12;

ans: a, d, e

**Checkpoint 3.3 (Please submit your answer to Moodle)**

What is the value of x after each statement is performed?

1. x = 6 + 3 \* 7 / 1 - 2;

ans: 25

1. x = 3 % 3 + 3 \* 2 - 2 / 2;

ans: 5

**Checkpoint 3.4 (Please submit your answer to Moodle)**

If x = 5, y = 6, z = 7, evaluate each of the following statements, if possible. If it is not possible, state the reason.

1. (x + z) % y

Ans: 0

1. (x % y) % z

Ans: 5

1. (x \* z) % y

Ans: 5

**Checkpoint 3.5 (Please submit your answer to Moodle)**

What is printed by the following program? Suppose the input is: 20 25

#include <iostream>

using namespace std;

const int NUM = 10;

const double X = 20.5;

int main()

{

int a, b;

double p;

char grade;

a = 23;

cout << "a = " << a << endl;

cout << "Enter two integers: ";

cin >> a >> b;

cout << endl;

cout << "The numbers you entered are "

<< a << " and " << b << endl;

p = X + 2 \* a - b;

cout << "p = " << p << endl;

grade = 'B';

cout << "Your grade is " << grade << endl;

a = 2 \* NUM + p;

cout << "The value of a = " << a << endl;

return 0;

}

Ans:

a = 23

Enter two integers:

The numbers you entered are 20 and 25

p = 35.5

Your grade is B

The value of a = 55

**Checkpoint 3.6 - 3.9 (Please evaluate your answer on Moodle)**

Refer to corresponding Moodle pages for details.