COMP2113 Programming Technologies
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.

a) cout << y;
b) cout << x -y;
c) cout << "y";
d) cout << "x = " << x;
e) cout << x * y << " = " << y * x;
f) p = x - y;
g) // cout << "x - y = " << x - y;

Ans:

a) 6
b) -2
c) y
d) x = 4
e) 24 = 24
f) no screen output
g) no screen output

Checkpoint 3.2 (Please submit your answer to Moodle)

Given the algebraic equation $y = ax^3 - 12$, 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: ade

Checkpoint 3.3 (Please submit your answer to Moodle)

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

a) x = 6 + 3 * 7 / 1 - 2;
b) x = 3 % 3 + 3 * 2 - 2 / 2;

Ans:

a) 25
b) 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.

a) (x + z) % y
b) (x % y) % z
c) (x * z) % y

Ans:

a) 0
b) 5
c) 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.