

ENGG1340 Computer Programming II
Module 3 Self-Review Exercise Answer

1. Evaluate the following expressions:

- a) $36 / 5$ 7
- b) $18 - 32 / 6 * 3$ 3
- c) $6 - 8 \% 11$ -2
- d) $22.0 / 5$ 4.4
- e) $25 - 7 \% 3 + 8 / 3$ 26
- f) $18.0 + 5.0 * 3.0 / 4.0$ 21.75

2. Suppose x, y, and z are int variables and x = 2, y = 5, and z = 6. What is the output of each of the following statements?

- a) `cout << "x = " << x << ", y = " << y << ", z = " << z;`
x = 2, y = 5, z = 6
- b) `cout << "Sum of " << x << " and " << z << " is " << x + z;`
Sum of 2 and 6 is 8
- c) `cout << "2 times " << x << " = " << 2 * x;`
2 times 2 = 4

3. The following program has syntax mistakes. Correct them. On each successive line, assume that any preceding error has been corrected.

```
const char = STAR = '*'
const int PRIME = 71;
int main
{
    int count, sum;
    double x;
    count = 1;
    sum = count + PRIME;
    x := 25.67;
    newNum = count * ONE + 2;
    sum + count = sum;
    x = x + sum * COUNT;
    cout << " count = " << count << ", sum = " << sum
        << ", PRIME = " << Prime << endl;
}

#include <iostream>                // include appropriate header
using namespace std;

const char STAR = '*';            // no "=" after char and semicolon at the end
const int PRIME = 71;

int main()                        // () after the main function name
{
    int count, sum;
    double x;
    int newNum;                   //declare newNum

    count = 1;
    sum = count + PRIME;
    x = 25.67;                    // := should be =
    newNum = count * 1 + 2;       // ONE is not declared, should be 1
    sum = sum + count;           // addition cannot be on the left of assignment
    x = x + sum * count;         // COUNT should be count
    cout << " count = " << count << ", sum = " << sum
        << ", PRIME = " << PRIME << endl;    // variable Prime should be PRIME
    return 0;
}
```

4. Suppose a, b, and c are int variables and a = 5 and b = 6. What value is assigned to each variable after each statement executes? If a variable is undefined at a particular statement, report UND (undefined).

	a	b	c
a = (b++) + 3;	9	7	UND
c = 2 * a + (++b);	9	8	26
b = 2 * (++c) - (a++);	10	45	27