

Name: Yichen Huang

CS403/503 Programming Languages
Spring 2021
Assignment #3

1. Problem 19 of Chapter 7 on Page 327

Answer:

a. Operands are evaluated left to right

$$X = 7$$

b. Operands are evaluated right to left

$$X = 12$$

2. Programming Exercise 7 of Chapter 7 on Page 328

Answer:

```
#include <iostream>
using namespace std;
void show_result(int a) {
    cout << "Value of the expression is " << a << "\n";
}
int main() {
    //declare variables
    int a = 3;
    int b = 4;
    int c = 5;
    int d = 6;
    //passing expression
    show_result(a+b-c*d);
    show_result(a+c*(-b)+d);
    show_result(++a+b-c*d++);
    show_result(a/b*(-c)+d);
    return 0;
}
```

Sample output:

Value of the expression is -23

Value of the expression is -11

Value of the expression is -22

Value of the expression is 2

Name: *Yichen Huang*

3. Programming Exercise 1 of Chapter 8 on Page 362

Answer:

a. C

```
for(k = (j+13)/27; k <= 10; k++) {  
    i = 3 * (k+1) - 1;  
}
```

b. Python

```
for k in range((j+13)/27, 11):  
    i = 3 * (k+1) - 1
```

c. Ruby

```
for k in ((j+13)/27)..10 do  
    i = 3 * (k+1) - 1  
end
```

4. Programming Exercise 5 of Chapter 8 on Page 363

Answer:

```
for (i = 1; i <= n; i++) {  
    int count = 1;  
    for(j = 1; j <= n; j++) {  
        if(x[i][j] == 0) {  
            count++;  
        }  
    }  
    if(count == n) {  
        printf("First all-zero row is: %d\n", i);  
        break;  
    }  
}
```