Assignment 3
(Formulas and operators)

Chung-Ang University

Exercise 1

- **Write the following program code**

```c
#include <stdio.h>

int main(void)
{
        int n1=7, n2=5;
        n1+=n2; //n1 = n1 + n2;
        printf("n1 += n2 : %d\n", n1);

        n2 += 12; //n2 + 12;
        printf("n2 += 12 : %d\n", n2);
        return 0;
}
```

Exercise 2

- **Write the following program code**

```c
#include <stdio.h>

int main(void)
{
        int num1 = 7;
        int num2, num3;

        num2 = ++num1;
        num3 = -- num1;

        printf("num1 : %d\n", num1);
        printf("num2 : %d\n", num2);
        printf("num3 : %d\n", num3);
        return 0;
}
```

Exercise 3

- **Write the following program code**

```c
#include <stdio.h>
int main()
{
        int num1 = 7;
        int num2, num3;

        num2 = num1++;
        num3 = num1--;

        printf("num1 : %d\n", num1);
        printf("num2 : %d\n", num2);
        printf("num3 : %d\n", num3);
}
```

Exercise 4

- **Write the following program code**

```c
#include <stdio.h>
int main()
{
        int num1, num2;
        num1 = 7;
        num2 = (num1--) + 5;

        printf("num1 : %d\n", num1);
        printf("num2 : %d\n", num2);
}
```

Exercise 5

- **Write the following program code**

```c
#include <stdio.h>
int main()
{
        int x = 3
        int y = 2;
        printf("%d\n", (x > y) ? x : y);
        printf("%d\n", (x < y) ? x : y);

}
```

Exercise 6

- **Write the following program code**

```
#define _CRT_SECURE_NO_WARNINGS
#include <stdio.h>
int main()
{
        int x, y, result;
        printf("enter two integers: ");
        scanf("%d %d", &x, &y);

        result = x + y;
        printf("%d + %d = %d\n", x, y, result);

        result = x - y;
        printf("%d - %d = %d\n", x, y, result);

        result = x * y;
        printf("%d - %d = %d\n", x, y, result);

        result = x / y;
        printf("%d - %d = %d\n", x, y, result);

        result = x % y;
        printf("%d - %d = %d\n", x, y, result);

        return 0;
}
```

Exercise 7

- **Write the following program code**

```
#define _CRT_SECURE_NO_WARNINGS
#include <stdio.h>
int main()
{
        int a = 1;
        int b = 0;
        if( a || (b = 5)){
                printf(" b is %d\n", b);
        }
        if( a && (b = 5)){
                printf("b is %d\n",b);
        }
        return 0;
}
```

Exercise 8

- **Write the following program code and fill in the blank to get same output (You can use misc operators)**

```
#define _CRT_SECURE_NO_WARNINGS
#include <stdio.h>
int main()
{
        int a ,b, c;
        scanf("%d %d", &a, &b);


                                        blank



        printf("bigger one is %d \n", c);
        return 0;
}
```

- **Output**

bigger one is 15
bigger one is 15

(if a is 15, b is 3)
(if a is 5, b is 15)

Exercise 9

- **Write the following program code and fill in the blank to get same output (You can use misc operators)**

```
#define _CRT_SECURE_NO_WARNINGS
#include <stdio.h>
int main()
{
        int a ,b;
        scanf("%d %d", &a, &b);

                                    blank


        return 0;
}
```

- **Output**

| a is bigger than b | **(if a is 15, b is 3)** |
| b is bigger than a | **(if a is 5, b is 15)** |

Exercise 10

- **Write the following program code**

```
#define _CRT_SECURE_NO_WARNINGS
#include <stdio.h>
int main()
{
        char a = 7;

        printf(" a XOR a is %d\n", a^a);
        printf(" a XOR a XOR a is %d\n", a^a^a);
        return 0;
}
```

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