

Assignment (3)

Questions:

- 1- What is the value of $31/3$?
- 2- What is the value of $31\%3$?
- 3- If myAge, a and b are all int variable, what are their values after:

```
myAge = 39 ;
A = myAge++ ;
b = ++myAge ;
```

- 4- What is the value of the following expressions:

I $8 + 2 * 3$	III $(5 * 2 - 3) / 6$
II $5 * 2 - 3 / 6$	IV $4 + 2 / 4 * 8$

- 5- If $x = 6$, $y = 7$, $z = 3$, determine whether the following expressions evaluate to TRUE or FALSE.

- A- $\text{if} (x > 4 \ \&\& \ Y > 5 \ || \ z > 7)$
- B- $\text{if} (x > 4 \ || \ y > 5 \ \&\& \ z > 7)$
- C- $\text{if} (x > 4 \ \&\& \ y > 5 \ \&\& \ z > 7)$
- D- $\text{if} (x == 6 \ \&\& \ x != 4)$
- E- $\text{if} (x == 8 \ || \ x == 6)$

- 6- What is the difference between $x = 5$ $x == 5$?

- 7- Do the following values evaluate to TRUE or FALSE ?

I: 0 II: 1 III: -1 IV: $x = 0$

V- $x == 0$ //assume that x has the value of 0.

- 8- Is the following a correct C ++ statement ?

```
if ( char C == ' Y ' ) then
    cout << "\n you typed Y " ;
```

If it is correct say what it does. If it is not correct, then correct it and say what it does.

- 9- The purpose of the conditional operator is to:

- a) Select the highest of two values.
- b) Select the more equal of two values.
- c) Select one of two values depending on a condition.

- 10- If numb is -42 , what is the value of this conditional expression?

```
numb = (numb < 0) ? 0 : numb * numb;
```

11- What gets printed from this program segment ?

```
Short int i=1, j=2;
```

```
if ( i == 1 ) {
```

```
    if ( j == 2 )
```

```
        cout << endl << i + j;
```

```
    }
```

```
else
```

```
    cout << endl << i - j;
```

```
    cout << endl << i * j;
```

12- What gets printed from this program segment ?

```
Short int i=1, j=2;
```

```
if ( i == 1 )
```

```
    if ( j == 2 )
```

```
        cout << endl << i + j;
```

```
    else
```

```
        cout << endl << i - j;
```

```
    cout << endl << i * j;
```

Exercises:

- 1- Write a C++ program that prints the square of a number the user types in. use floating point.
- 2- Write a single if statement that examines two integer variables and changes the larger to the smaller, using only one else clause.
- 3- Examine the following program. Imagine entering three numbers, and write what output you expect.

```
#include <iostream.h>
```

```
int main( )
```

```
{
```

```
    short int a, b, c;
```

```
    cout << "\nPlease enter three numbers: \n";
```

```
    cout << "a: "; cin >> a;
```

```
    cout << "\nb: ";    cin >> b;
```

```
    cout << "\nc: ";    cin >> c;
```

```
if (c = (a - b)){
    cout << "a= " << a << "minus b " << b <<
        "equals c " << c << endl;
}
else
    cout << "a - b does not equal c.\n";
return 0;
}
```

- 4- Enter the program from exercise 3; compile, link and run it. Enter the numbers 20, 10 and 50. Did you get the output you expected? Why not?
- 5- Examine this program and show what it prints.

```
#include <iostream.h>
int main( )
{
    short int a = 1, b = 1, c;
    if (c = (a - b))
        cout << "\nThe value of c is " << c;
    return 0;
}
```

- 6- Enter the program from exercise 5; compile, link and run it. What was the output? Why?