

CS 128 – Introduction to C++, Assignment 1

Name and ID	
OS	
Compiler	

Arithmetic			
Expression	Result	Highest precedence operator	
$5 + 3 / 2$			
$(5 + 3) / 2$			
$(4 + 8 \% 3) / 2$			
$4 + 8 \% 3 / 2$			
<p>What happens when the expression $8.0 \% 3$ is entered? Why do you think this is?</p>			

Mixed Mode Arithmetic				
<p>Determine whether each of the following expressions is valid or invalid. If valid, indicate the result and whether it is an integer or floating point value. Following code may be helpful. Hint: Copy and paste the statements from the table to the code for the exp and for the cout statement.</p>				
<pre>#include <iostream> #include <typeinfo> using namespace std; int main() { const auto exp = 6.0 / 2; cout << endl << "6.0 / 2 = " << exp << " " << typeid(exp).name(); // output from typeid(exp).name(), d denotes floating point and i denotes integer }</pre>				

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Expression	Valid?	Result	Data type of result
12.0 / 2.0 + 5 * 2			
10 / 2 + 6 / 3			
10 / 4 + 6 / 2			
10 % 4 + 6 % 3			
10.0 / 4			
10 / 4.0			
6.0 / 2			
10.0 / 4 + 6 / 2			
10 / 4 + 6.0 / 2			
(10.0 / 2.0 % 2) / 10			
((10.0 / 2.0) % 2) / 10			
(10.0 / 2 % 2) / 10			
(10 / 2 % 2)			
(10 / 2 % 2) / 10			
(10 / 2 % 2) / 10.0			

Increment and Decrement Operators

Run the following code:

```
#include <iostream>
#include <typeinfo>
using namespace std;
int main()
{
    auto age = 19;
    cout << endl<< age++ << " " << age << endl;
    age = 19;
    cout << endl<< ++age << " " << age << endl;
}
```

What seems to be the difference between age++ and ++age with respect to the variable age?

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