

Lab 1.4.2 Ints: operators and expressions

Objectives

Familiarize the student with:

- shortcut and pre/post increment/decrement operators;
- building simple expressions;
- translating verbal description into programming language;
- testing code using known input and output data.

Scenario

Take a look at the code below: it reads two integer values, manipulates them and finally outputs the k variable. The problem is that the manipulations have been described using natural language, so the code is completely useless now.

We want you to act as an intelligent (naturally!) compiler and to translate the formula into real C++ notation. Try to use pre/post and short-cut operators – they fit perfectly into some of the steps.

Test your code using the data we've provided.

```
#include <iostream>

using namespace std;

int main(void) {
    int i, j, k;

    cout << "Enter i: ";
    cin >> i;
    cout << "Enter j: ";
    cin >> j;

    // increment i by 2
    // decrement j by i
    // divide i by j giving k
    // increment k by k
    // decrement k by 1
    // assign k modulo i to j
    // increment k by k added to i
    // increment k by k divided by j
    // assign k times k times k to k
    // increment k by i times j

    cout << k;
    return 0;
}
```

Example input

```
100
3
```

Example output

```
261838
```

Example input

```
3
100
```

Example output

```
-5
```

Example input

```
123
321
```

Example output

```
-125
```