

## Physics 234: Quiz 2

Friday, January 28, 2011

Student's Name: \_\_\_\_\_

1. Change *three* numbers (literals of type `int`) in the program `grid.cpp` so that it actually produces the output shown.

```
$ more grid.cpp
#include <iostream>
using std::cout;
using std::endl;

#include <iomanip>
using std::setw;

int main()
{
    int n = 0;
    do
    {
        cout << setw(6) << n;
        if ((++n)%6 == 0) cout << endl;
    } while (n < 36);

    return 0;
}
$ make grid
g++      grid.cpp  -o grid
$ ./grid
    1     2     3     4     5     6
    7     8     9    10    11    12
   13    14    15    16    17    18
   19    20    21    22    23    24
   25    26    27    28    29    30
   31    32    33    34    35    36
```

2. The `assert` statement in `grid2.cpp` checks that the variable `i` has a given integer value. What number must be placed in the blank so that the program does *not* issue a run-time error?

```
$ more grid2.cpp
#include <cassert>

#include <iostream>
using std::cout;
using std::endl;

#include <iomanip>
using std::setw;

int i = -1;

int main()
{
    int i = 3;

    for (int i = 1; i <= 6; ++i)
        for (int j = 0; j < 6; ++j)
            cout << setw(6) << 6*j+i;
            cout << endl;

    assert(i == _____ );

    return 0;
}
$ make grid2
g++      grid2.cpp      -o grid2
$ ./grid2
    1     7     13     19     25     31
    2     8     14     20     26     32
    3     9     15     21     27     33
    4    10     16     22     28     34
    5    11     17     23     29     35
    6    12     18     24     30     36
```

3. The program in question 2 has a conceptual error. (Not a syntax error: it does compile.) Add *one pair* of matching braces so that it produces the output shown.