GCD in C++

```
#include <iostream>
using namespace std;

class GCD {
public:
    static int gcd(int a, int b) {
        if (b == 0) {
            return a;
        } else {
            return gcd(b, a % b);
        }
    }

    static void main() {
        cout << gcd(30, 36) << endl;
    }
};

int main() {
    GCD::main();
    return 0;
}
```

Function: gcd(a, b)

This uses the rule:

gcd(a, b) = gcd(b, a % b)

…until b == 0.

Dry Run Table for gcd(30, 36)

Call Depth	a	b	a % b	Next Call	Returned Value
1	30	36	30	gcd(36, 30)	
2	36	30	6	gcd(30, 6)	
3	30	6	0	gcd(6, 0)	6
← Return				← back to depth 2	6
← Return				← back to depth 1	6

Final Output:

6

6