

## 1 usefull links for this lab

- <http://www.cplusplus.com>
- [http://www.mingw.org/wiki/MinGW\\_for\\_First\\_Time\\_Users\\_HOWTO](http://www.mingw.org/wiki/MinGW_for_First_Time_Users_HOWTO)
- <https://www.geeksforgeeks.org/c-data-types/>

## 2 problem set

---

## 37267. A+B

Input file:            **standard input**  
Output file:         **standard output**  
Time limit:          2 seconds  
Memory limit:       64 megabytes

You are given two integers  $a$  and  $b$ . Print  $a + b$ .

### Input

The only line of the input contains integers  $a$  and  $b$  ( $-10000 \leq a, b \leq 10000$ ).

### Output

Print  $a + b$ .

### Examples

standard input	standard output
1 2	3
15 14	29
894 197	1091
8581 6058	14639
289 21	310

---

## 71697. Code

Input file:            `standard input`  
Output file:          `standard output`  
Time limit:           1 second  
Memory limit:        256 megabytes

Almat is the KBTU student. Recently he managed to get to the ACM finals, but in order to be registered at the finals he needs a secret code which consists of only digits. Code is constructed from two numbers  $n$  and  $m$ . The first number - age of the contestant. The second number - sum of the first and the last digits of the 3-digit random number  $k$  given by administration of the finals. Help Almat to construct the code.

### Input

The first line contains non-negative number  $n$  ( $1 \leq n \leq 1000$ ) - age of the contestant. The second line contains non-negative number  $k$  ( $100 \leq k \leq 1000$ ) — random number.

### Output

Calculate the sum of the numbers  $n$  and  $m$ .

### Examples

standard input	standard output
18 123	22
17 391	21
0 100	1
505 100	506
1000 999	1018

---

## 51447. Bits

Input file:            **standard input**  
Output file:          **standard output**  
Time limit:           **2 seconds**  
Memory limit:        **64 megabytes**

You are given integer number  $N$ , guaranteed that the number has exactly 4 bits in binary representation. reverse the number in binary representation and print out it.

### Input

One integer number  $N$

### Output

Reversed number

### Examples

standard input	standard output
12	3
11	13
13	11
9	9
10	5

### Note

reverse example: 12 in binary representation is 1100, 0011 is reversed number, it means you should output 3.

---

## 51191. Root

Input file:            `standard input`  
Output file:         `standard output`  
Time limit:           `2 seconds`  
Memory limit:        `64 megabytes`

You are given integer number. Print out its square root value.

### Input

One integer number.

### Output

One double number.

### Examples

standard input	standard output
10	3.1622776602
20	4.4721359550
9	3.0000000000
82499	287.2263915451
9752	98.7522151650
78985	281.0427013818

### 3 lab contest

All given task are emplaced in automated checker system for **lab1**: [http://acm.kbtu.kz/cgi-bin/new-register?action=211&contest\\_id=125](http://acm.kbtu.kz/cgi-bin/new-register?action=211&contest_id=125)  
Feel free to submit your solutions without attempt count penalty.

### 4 solutions

#### problem 37267

```
1 #include <iostream>
2
3 using namespace std;
4
5 int main(){
6
7     int a, b;
8
9     cin >> a >> b;
10
11     cout << a + b;
12
13     return 0;
14 }
```

#### problem 71697

```
1 #include <iostream>
2
3 using namespace std;
4
5 int n, k;
6
7 int main() {
8
9     cin>>n>>k;
10
11     cout<<n + (k % 10 + k / 100);
12
13     return 0;
14 }
```

#### problem 51447

```
1 #include <iostream>
```

```

2 #include <cmath>
3
4 using namespace std;
5
6 int main() {
7     int n;
8     cin >> n;
9     int m = 0;
10    int k = 1;
11    for (int i = 3; i >= 0; i--) {
12        if ((n & (1 << i)) > 0) {
13            m = m + k;
14        }
15        k *= 2;
16    }
17    cout << m;
18    return 0;
19 }

```

### problem 51191

```

1 #include <iostream>
2 #include <cmath>
3
4 using namespace std;
5
6 int main(){
7
8     int x;
9
10    cin >> x;
11
12    cout << sqrt(x);
13
14    return 0;
15 }

```

## 5 Additional tasks for this lab

You can solve problems starting from A to J from the link below:

<https://informatics.msk.ru/mod/statements/view.php?id=2296>

*note: statements in russian*