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- 3 problem set

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## 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

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## 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

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## 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.

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## 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

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## 51445. Value of bit

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

### Input

Given integer number  $n$  and  $i$ .

### Output

Output value of  $i$  –  $th$  bit of the number  $n$ , that is 0 or 1.

### Examples

standard input	standard output
179 0	1
4242 13	0
3086 28	0
9226 19	0
8071 2	1
2910 11	1

## 4 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.

## 5 solutions

```
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 }
```

```
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 }
```

```
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 }

```

```

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 }

```

```

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

```



## 6 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*