

<b>Status</b>	Finished
<b>Started</b>	Friday, 31 October 2025, 9:55 PM
<b>Completed</b>	Friday, 31 October 2025, 10:28 PM
<b>Duration</b>	32 mins 30 secs

Question **1**

Correct

The k-digit number N is an Armstrong number if and only if the k-th power of each digit sums to N.

Given a positive integer N, return true if and only if it is an Armstrong number.

Example 1:

Input:

153

Output:

true

Explanation:

153 is a 3-digit number, and  $153 = 1^3 + 5^3 + 3^3$ .

Example 2:

Input:

123

Output:

false

Explanation:

123 is a 3-digit number, and  $123 \neq 1^3 + 2^3 + 3^3 = 36$ .

Example 3:

Input:

1634

Output:

true

Note:

$1 \leq N \leq 10^8$

**Answer:** (penalty regime: 0 %)

```
1 #include<stdio.h>
2 #include<math.h>
3 int main(){
4     long long int num,sum=0,nod=0,rem,temp;
5     scanf("%lld",&num);
6     temp=num;
7     while(num>0){
8         nod++;
9         num=num/10;
10    }
11    num=temp;
12    while(num>0){
13        rem=num%10;
14        sum=sum+pow(rem,nod);
15        num=num/10;
16    }
17    if(sum==temp)
18        printf("true");
19    else
20        printf("false");
21    return 0;
22 }
```

	Input	Expected	Got	
✓	153	true	true	✓
✓	123	false	false	✓

Passed all tests! ✓

Question **2**

Correct

Take a number, reverse it and add it to the original number until the obtained number is a palindrome.

**Constraints** $1 \leq \text{num} \leq 999999999$ **Sample Input 1**

32

**Sample Output 1**

55

**For example:**

Input	Result
32	55
1234	5555

**Answer:** (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main(){
3     long long int num,sum,revnum,tempnum,tempsum;
4     scanf("%lld",&num);
5     while(1){
6         revnum=0;
7         tempnum=num;
8         while(num){
9             revnum=revnum*10+(num%10);
10            num=num/10;
11        }
12        sum=tempnum+revnum;
13        tempsum=sum;
14        revnum=0;
15        while(sum){
16            revnum=revnum*10+(sum%10);
17            sum=sum/10;
18        }
19        if(tempsum==revnum)
20            break;
21        num=tempsum;
22    }
23    printf("%lld",tempsum);
24    return 0;
```

25 |}



	Input	Expected	Got	
✓	32	55	55	✓
✓	1234	5555	5555	✓

Passed all tests! ✓



Question **3**

Correct

Maya, a student in an arts and crafts class, wants to create a pattern using stars (\*) in a specific format. She plans to use a program to help her construct the pattern.

Write a program that takes an integer as input and constructs the following pattern using nested for loops.

Input: 5

Output:

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

**Answer:** (penalty regime: 0 %)

```
1  #include<stdio.h>
2  int main(){
3      int n;
4      scanf("%d", &n);
5      for(int i=1;i<=n;i++){
6          for(int j=1;j<=i;j++){
7              printf("* ");
8          }
9          printf("\n");
10     }
11     for(int i=n-1;i>=1;i--){
12         for(int j=1;j<=i;j++){
13             printf("* ");
14         }
15         printf("\n");
16     }
17     return 0;
18 }
```



	Input	Expected	Got	
✓	5	<pre>* *</pre>	<pre>* *</pre>	✓

Passed all tests! ✓