Status	Finished
Started	Monday, 3 November 2025, 10:35 AM
Completed	Monday, 3 November 2025, 11:08 AM
Duration	32 mins 59 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 != 1^3 + 2^3 + 3^3 = 36.

Example 3:

Input:

1634

Output:

true

Note:

1 <= N <= 10^8

Answer: (penalty regime: 0 %)

```
#include<stdio.h>
#include<math.h>
int main(){
long long int num,sum=0,nod=0,rem,temp;
scanf("%lld",&num);
temp=num;
while(num>0){
nod++;
num=num/10;
}
num=temp;
while(num>0){
rem=num%10;
sum=sum+pow(rem,nod);
num=num/10;
}
if(sum==temp)
printf("true");
else
printf("false");
return 0;
}
```

	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<=num<=99999999

Sample Input 1

32

Sample Output 1

55

For example:

Input	Result
32	55
1234	5555

Answer: (penalty regime: 0 %)

```
#include<stdio.h>
int main(){
    long long int num,sum,revnum,tempnum,tempsum;
    scanf("%lld",&num);
    while(1)
    {
        revnum=0;
        tempnum=num;
        while(num)
        {
            revnum=revnum*10+(num%10);
            num=num/10;
        }
        sum=tempnum+revnum;
        tempsum=sum;
        revnum=0;
        while(sum)
        {
            revnum=revnum*10+(sum%10);
            sum=sum/10;
```

```
        }
        if(tempsum==revnum)
        break;
        num=tempsum;
    }
    printf("%lld",tempsum);
    return 0;
}
```

	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 %)

```c
#include<stdio.h>
int main(){
    int n;
    scanf("%d",&n);
    for(int i = 1; i <= n; i++){
        for(int j = 1;j <= i; j++){
            printf("* ");
        }
        printf("\n");
    }
    for(int i = n - 1; i >= 1; i--){
        for(int j = 1; j <= i; j++){
            printf("* ");
        }
        printf("\n");
    }
    return 0;
}
```

	Input	Expected	Got	
✓	5	* *	* *	✓

Passed all tests! ✓