Status	Finished
Started	Sunday, 2 November 2025, 1:52 PM
Completed	Sunday, 2 November 2025, 2:25 PM
Duration	32 mins 37 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 %)

```c
#include <stdio.h>
#include<math.h>
int main(){
    int n,t,r,sum=0,d=0;
    scanf("%d",&n);
    t=n;
    for(int x=n;x>0;x/=10)d++;
    for(;t>0;t/=10){
        r=t%10;
        sum +=pow(r,d);

    }
    printf(sum==n?"true":"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>
long rev(long n){long r=0;while(n)
{r=r*10+n%10;n/=10;} return r;}
int main(){
    long n;scanf("%ld",&n);
    while (n!=rev(n)) n+=rev(n);
    printf("%ld",n);
    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,i,j;
    scanf("%d",&n);
    for(i=1;i<=n;i++,printf("\n"))
        for(j=1;j<=i;j++)printf("* ");
    for(i=n-1;i>=1;i--,printf("\n"))
        for(j=1;j<=i;j++)printf("* ");

}
```

	Input	Expected	Got	
✓	5	* *	* *	✓

Passed all tests! ✓