

Status	Finished
Started	Sunday, 2 November 2025, 8:05 PM
Completed	Sunday, 2 November 2025, 10:00 PM
Duration	1 hour 55 mins

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 $1^3 + 5^3 + 3^3 = 153$.

Example 2:

Input:

123

Output:

false

Explanation:

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

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
5 {
6     long long int num,sum=0,nod=0,rem,temp;
7     scanf("%lld",&num);
8     temp=num;
9     while(num>0)
10    {
11        nod++;
12        num=num/10;
13    }
14    num=temp;
15    while(num>0)
16    {
17        rem=num%10;
18        sum=sum+pow(rem,nod);
19        num=num/10;
20    }
21    if(sum==temp)
22        printf("true");
23    else
24        printf("false");
25    return 0;
26 }
```



	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

$1 \leq \text{num} \leq 99999999$

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 reverse(int n)
3 {
4     int rev=0;
5     while(n>0)
6     {
7         rev=rev*10+n%10;
8         n=n/10;
9     }
10    return rev;
11 }
12 }
13 int main()
14 {
15     int num;
16     scanf("%d",&num);
17     while(num!=reverse(num))
18     {
19         num=num+reverse(num);
20     }
21     printf("%d",num);
22     return 0;
23 }
```

	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(void)
3 {
4     int n,i,j;
5     scanf("%d",&n);
6     for (i=1; i<=n; i++){
7         for(j=1;j<=i;j++){
8
9             printf("*");
10            if(j<i)printf(" ");
11        }
12        printf("\n");
13    }
14    for(i=n-1;i>=1;i--){
15        for (j=1;j<=i;j++){
16            printf("*");
17            if(j<i)printf(" ");
18        }
19        if(i>1)printf("\n");
20    }
21    return 0;
22 }
```



	Input	Expected	Got	
✓	5	* *	* *	✓

Passed all tests! ✓