

Status	Finished
Started	Sunday, 2 November 2025, 11:54 AM
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Duration	18 mins 53 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 $1^3 + 5^3 + 3^3 = 153$.

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     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 }
```

	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 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 }
```

	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     int i,j;
6     for(i=1;i<=n;i++){
7         for(j=1;j<=i;j++){
8             printf("* ");
9         }
10        printf("\n");
11    }
12    for(i=n-1;i>=1;i--){
13        for(j=1;j<=i;j++){
14            printf("* ");
15        }
16        printf("\n");
17    }
18    return 0;
19 }
```

	Input	Expected	Got	
✓	5	*	*	✓
		* *	* *	
		* * *	* * *	
		* * * *	* * * *	
		* * * * *	* * * * *	
		* * * *	* * * *	
		* * *	* * *	
		*	*	

Passed all tests! ✓