

<b>Status</b>	Finished
<b>Started</b>	Tuesday, 4 November 2025, 5:54 PM
<b>Completed</b>	Tuesday, 4 November 2025, 6:15 PM
<b>Duration</b>	20 mins 47 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  {
5      int n,i,nc,nc1,ct=0;
6      int rev=0;
7      scanf("%d",&n);
8      nc=n;
9      while(nc>0)
10     {
11         nc=nc/10;
12         ct++;
13     }
14     nc1=n;
15     while(nc1>0)
16     {
17         i=nc1%10;
18         rev=rev+(int)pow(i,ct);
19         nc1=nc1/10;
20     }
21     if(rev==n)
22     {
23         printf("true");
24     }
25     else
26     {
27         printf("false");
28     }
29     return 0;
30 }
```



	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  {
4      int n,m;
5      int o=0;
6      int p=0;
7      scanf("%d",&n);
8      do
9      {
10         o=n;
11         m=0;
12         while(n!=0)
13         {
14             m=(m*10)+(n%10);
15             n=n/10;
16         }
17         n=o+m;
18         p++;
19     }
20     while(n!=p);
21     printf("%d\n",n);
22 }
```

```
21 | while(m!=0 || p==1);  
22 | printf("%d",m);  
23 | return 0;  
24 |  
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  {
4      int n,i,j;
5      scanf("%d",&n);
6      for(i=1;i<=n;i++)
7      {
8          for(j=1;j<=i;j++)
9          {
10             printf("* ");
11
12         }
13         printf("\n");
14
15     }
16     for(i=n;i>=2;i--)
17     {
18         for(j=i;j>=2;j--)
19         {
20             printf("* ");
21
22         }
23         printf("\n");
24     }
25     return 0;
```

```
26 |  
27 |}
```



	Input	Expected	Got	
✓	5	* *	* *	✓

Passed all tests! ✓

