

Status	Finished
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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 int main()
3 {
4     int n,t,org,r,res=0,d=0;
5     scanf("%d",&n);
6     org=n;
7     t=n;
8     while(t!=0)
9     {
10         t/=10;
11         d++;
12     }
13     t=n;
14     while(t!=0)
15     {
16         r=t%10;
17         int pow=1;
18         for(int i=0;i<d;i++)
19         {
20             pow*=r;
21         }
22         res+=pow;
23         t/=10;
24     }
25     if(res==org)
26     printf("true");
27     else
28     printf("false");
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

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

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 {
4     int n,t,rev,r;
5     scanf("%d",&n);
6     while(1)
7     {
8         t=n;
9         rev=0;
10        while(t!=0)
11        {
12            r=t%10;
13            rev=rev*10+r;
14            t/=10;
15        }
16        if(n==rev)
17        break;
18        n=n+rev;
19    }
20    printf("%d",n);
21    return 0;
22 }
```

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

	Input	Expected	Got	
✓	5	* *	* *	✓

Passed all tests! ✓