

# مکتب شریف

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تمرین گروهی

(CW1)

پنجشنبه

مکتب شریف

- جاوا





Q1. Given an integer num, return the number of steps to reduce it to zero.

In one step, if the current number is even, you have to divide it by 2, otherwise, you have to subtract 1 from it.  
for instance:

Input: num = 14

Output: 6

Explanation :

Step 1) 14 is even; divide by 2 and obtain 7.

Step 2) 7 is odd; subtract 1 and obtain 6.

Step 3) 6 is even; divide by 2 and obtain 3.

Step 4) 3 is odd; subtract 1 and obtain 2.

Step 5) 2 is even; divide by 2 and obtain 1.

Step 6) 1 is odd; subtract 1 and obtain 0.

Q2. write a program that gets 10 numbers from the scanner and finds min and max.

Q3. Write a program that displays the n odd natural numbers and their sum .

Q4. Write a program to find the sum of the series  $1 + 11 + 111 + 1111 + \dots$  n terms.

Test Data :

Input the number of terms : 5

Expected Output :

$1 + 11 + 111 + 1111 + 11111$

The Sum is : 12345

Q5. Write a program to display the such a pattern for n number of rows using a number which will start with the number 1 and the first and a last number of each row will be 1

```

1
121
12321
1234321
123454321
    
```

Input : 5

Output :

```

1
121
12321
1234321
123454321
    
```

Input : 3

Output :

```

1
121
12321
    
```

Q6. Write a program to find out the sum of a series.

Test Data :

Input the starting number of the series: 1

Input the number of items for the series: 10

Input the common difference of series: 4

Expected Output :

The Sum of the series are :

$1 + 5 + 9 + 13 + 17 + 21 + 25 + 29 + 33 + 37 = 190$

Q7. <https://quera.org/problemset/66861/>

Q8. <https://quera.org/problemset/66859/>

Q9. <https://quera.org/problemset/9773/>