

### Question 3

Correct

Marked out of  
1.00

🚩 Flag question

Write a program that takes two integers A and B as input, and outputs the following:

Line 1 : Sum of A and B

Line 2: Integer division of A upon B

Line 3: Division of A upon B

Line 4: Remainder when A is divided by B

(2 marks)

**Answer:** (penalty regime: 0, 0 %)

#### Question 4

Correct

Marked out of  
1.00

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A perfect number is a positive integer that is equal to the sum of its proper divisors(all divisors excluding the number itself).

Write a python program that computes the factors of a number  $N$ , and prints if the number is a perfect number or not.

**Answer:** (penalty regime: 0, 0 %)

### Question 5

Correct

Marked out of  
1.00

🚩 Flag question

Write a program to print the average of the Even numbers between X and Y (inclusive). Your program should compute the average even if the value of X is greater than Y.

Note: Your program should include the numbers X and/or Y if they are even.

#### **Input format:**

Line 1 : value of X

Line 2 : value of Y

#### **Output format:**

Average value

### Question 6

Incorrect

Marked out of  
1.00

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Write a program to enter a number N and print the sequence of numbers obtained by multiplying the digits of the number, until it reaches a single-digit number.

#### **Input format:**

Line1: value of N

#### **Output format:**

Space-separated sequence of numbers from N to a single-digit number(generated as per the question)

### Question 7

Correct

Marked out of  
1.00

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Write a Python program to enter a positive integer N as input and print the sum of odd digits in the number.

e.g.,

if N is 8356; sum of odd digits =  $3+5 = 8$

**Input format:**

Line1: value of N

**Output format:**

Line 1: sum of the odd digits in N

### Question 8

Not complete

Marked out of  
1.00

🚩 Flag question

Given two integers  $n$  and  $r$  ; in how many ways can you choose  $r$  items from  $n$  items?

#### **Input Format:**

The first line contains the number of test cases  $T$ . Each of the next  $T$  lines contains two integers  $n$  and  $r$ .

#### **Output Format**

Output  $T$  lines, containing the required answer for the corresponding test case.

### Question 9

Correct

Marked out of  
1.00

🚩 Flag question

Write a program that takes a positive integer as input and prints the digits in reverse order.

**Input format:**

a positive integer

**Output format:**

the reversed integer

**Sample Test Case:**

**Input :**

7853

**Output :**

3587



**Question 10**

Correct

Marked out of  
1.00

🚩 Flag question

Write a program to calculate and print the Electricity bill of a given customer. The customer id, name, and number of units consumed by the user should be taken as inputs. Display the customer details and the total amount to be paid by the customer. The charges are as per the following slabs:

| Unit            | Charge/unit |
|-----------------|-------------|
| 1 - 150 units   | 50 paise    |
| 151- 400 units  | Rs.1.20     |
| 401 - 670 units | Rs.1.80     |
| 671 and above   | Rs.2.00     |

If the bill exceeds Rs.400, then an additional surcharge of 15% will be charged.



DATA

### Question 1

Not complete

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Flag question

Write a program to input two numbers N and M, and print a pattern as below:

Note: This pattern is for the input value, N=5(no of lines) and M=9(starting number). There is no empty line between two printed lines.

```
9
8 9
7 8 9
6 7 8 9
5 6 7 8 9
```

#### Input format:

Line1: value of N and M (space separated)

#### Output format:

Pattern

#### Sample Test case:

Input:

5 9

## Question 2

Correct

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1.00

🚩 Flag question

You are transporting some boxes through a tunnel. A box can be carried through the tunnel only if its width is strictly less than a value  $W$ , and height is strictly less than a value  $H$ . For each box that can be successfully transported to the other end of the tunnel, print the length, width, height, and volume of the box.

If there is no box satisfying the criteria above, display "NIL".

Note: Boxes cannot be rotated.

### Input Format

Line 1: Values of  $W$  and  $H$  separated by space

Line 2: number of boxes,  $N$ .

Line 3: length, width and height of box1, separated by space

Line 4: length, width and height of box2, separated by space

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