

Calculate Electric Bill

Create a class ElectricityBill, to calculate the bill amount for electricity consumed based on the input meter readings. Accept the previous and current meter readings in KW using a Scanner.

Bill amount for electricity charges are calculated based on the following

- The units consumed by customer is calculated by subtracting the previous meter reading from the current meter reading
- For the first 30 KW, the price is Rs 2.30/KW
- For the next 70 KW, the price is Rs 3.50/KW
- Units above 100 kw are charged at Rs 4.60/KW

Calculation:

1. current reading: 1251 kw, previous reading: 1000 kw
Units consumed = 251 kw, Bill Total = $(30 \times 2.3) + (70 \times 3.5) + (151 \times 4.6)$
2. current reading: 1090, previous reading: 1000
Units consumed = 90, Bill Total = $(30 \times 2.3) + (60 \times 3.5)$

Input and Output format:

Previous reading and current reading are integers. Bill amount is a float

Sample

Enter the previous reading

1000

Enter the current reading

1251

Output:

The Bill amount should be printed correct to 2 decimal places.

Bill Amount is 1008.60

Circle Data

Write a program to calculate various data for a circle based on radius. The input to the program is the radius of circle and the required output data.

Refer the table below for the required output

Output data required	Output code	Formula
Diameter	DIA	$2 r$
Area	AR	πr^2
Perimeter	PER	$2 \pi r$
Area of Semi Circle	ARSEM	πr

Input and Output Format:

Input consists of a radius(float) and string (output required). All floating point numbers are displayed correct to 2 decimal places. Refer sample input and output for formatting specifications.

Sample Input :

Enter the Radius

5

Enter Output required

DIA

Sample Output :

Diameter of circle is 10

Special Sequence

In a special sequence of numbers, 2, 1 and 3 are the 1st three numbers. All other numbers in the sequence are generated by the sum of their 3 most recent predecessors.

Write a program to generate this special sequence where the last number in the sequence is less than or equal to the input number 'n'

Input Format:

Input consists of a single integer which corresponds to n.

Output Format:

Output consists of the Sequence, separated by a single space. There are no leading or trailing spaces in the output.

Sample Input

20

Sample Output

2 1 3 6 10 19

Vehicle Number

Raj is buying a two wheeler and believes in numerology. He is interested in getting a special registration number whose sum of digits is equal to 9. Registration numbers are of 4 digits.

Raj wants to go to the RTO with a list of numbers within a range to check the availability. Write a program to help Raj in identifying those numbers

Input Format:

Input consists of 2 integer's m and n. m and n should be of 4 digits.

Sample Input 1:

1100

1120

Sample Output 1:

1107

1116

Number Pattern

Write a program to generate the following pattern. Multiples of 3 should be omitted in the pattern

```
1
2 2
4 4 4 4
5 5 5 5 5
7 7 7 7 7 7
.....
n n n n n.....n
```

Input Format:

Input consists of 1 integer which corresponds to n.

Output Format:

Refer sample output for details. [Note: 2 integers on the same line are separated by a space.]

Sample Input :

5

Sample Output:

```
1
2 2
4 4 4 4
5 5 5 5 5
```