----------------PROBLEM STATEMENTS IN JAVA USING CONTROL STATEMENTS---
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1. Write a program to print the following series
2 5 11 17 23 31 41 47 59 ...
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2. Write a java program that allows the user to enter 'n' numbers and
finds the number of positive numbers entered and the sum of all
positive
numbers entered using a for loop.

Sample Input and Output:
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Enter the value of n
4
Enter the number
5
Enter the number
-2
Enter the number
-1
Enter the number
6

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3.
Character experience is one of the main attractions in the Disneyland.
'Alice' from the movie 'Alice in Wonderland' is one of the famous
characters.
Patrick and Johnny just reached Disneyland and decided to have
character
 experience. Since both of them like Alice, they decided to visit Alice
 first.
To their surprise, Alice was missing.
Then they realized that they have to solve puzzle to meet Alice.
They found many ways numbered from 1,2,3,........18.
They were confused about the way that will lead them to Alice.
They found a cute bird, standing in one of the tree.
The bird was chirping a number. They realised that the number was the
clue to find the correct path.
They also found a note with a message- 'sum the digits'.
 That is, if the bird said 23, then the 5th (2+3=5) way will lead them
to
 Alice's place. They were already confused, so pls help Patrick and
 Johnny in finding the correct route...

Input Format:
Input consists of an integer corresponding to the 2-digit number.

SAMPLE INPUT & OUTPUT:
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The bird said :
23
Patrick and Johnny must go in path-5 to find Alice

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4. Sita wanted to celebrate the good news of her promotion.
She took her niece Mahirl along with her and went to Fun Mall to meet
her
close friend Gita.
Gita was busy with her customers and she asked her to wait for an hour.
Mahirl grew restless sitting idle. So Sita took her around the Mall.
A competition for kids was going on in the 1st floor.
They were given 'n' fancy sticks in different colors of 2 cm length and
they
were asked to form the largest square possible.
Many kids were playing with the fancy sticks. Mahirl always likes
colorful
sticks and she also wanted to take part in the competition.
But the organisers told that the competition is open only for kids
above 10
years.
Mahirl started crying and they allowed her to participate in the
contest.
They asked to Sita to give her instructions. But Sita should not touch
any
of the sticks.
Sita has good reasoning skills and she was wondering what could be the
area
of the largest square that can be formed using 'n' sticks.
Can you help Sita out and help Mahirl in winning the prize?

Sample Input:
9
Sample Output:
16

5.The next game for the kids was based on Chess Board.

All kids were asked the same question ""How many bishops can be placed
on a
chessboard without threatening each other? The Chess Board size is
N*N".
Mahirl wanted to participate in this game too.
Sita knows that a bishop's moves are quite complicated and it is
difficult to
 make a 4—year kid understand the bishop moves. A bishop can move to
any
distance in any of the four diagonal directions. A bishop threatens
another
 bishop if it can move to the other bishop's position.
Sita needs to find a way in which Mahirl could give the correct anwer
to this
question. Mahirl is good at addition and subtraction. She is not
familiar
 with other arithmetic operations yet.
Help Sita to compute the maximum number of bishops that can be placed
on a chessboard in such a way that no two bishops threaten each other
and to make Mahirl win in this game too.

Input Format:
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Input consists of a single integer N representing the size of the i-th
 chessboard. [N <= 100000]
Output Format:
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Output consists of a single integer , the maximum number of bishops
that can
 be placed on the chessboard without threatening each other.

Sample Input1:
2
Sample Output1:
2

Sample Input2:
4
Sample Output2:
6

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6. This program must calculate how many tiles are needed to tile a
floor.
 The tiles are 8 inches by 8 inches. Tiles can be used as a whole or a
part
of the tile can be used. Only one usable piece can be cut from a tile.
That is, if a piece is cut from a tile, the rest of the tile must be
thrown
 away. The program accepts the length and width of the room and returns
how
 many whole tiles are used and how many part tiles are used. The length
is
 given in inches.

Input Format:
Input consists of 2 integers. The first integer corresponds to the
width of
the room and the second integer corresponds to the length of the room.

Output Format:
Output consists of 2 integers. The first integer corresponds to the
number
of whole tiles used and the second integer corresponds to the number of
part
 tiles used.

Sample Input 1:
160
240

Sample Output 1:
600
0

Sample Input 2:
100
120

Sample Output 2:
180
15

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7. A maths teacher asks her students to give 3 examples for positive
odd
 numbers. When the student specifies a correct answer, his/her score is
 incremented by 1. When the student specifies a positive even number,
his/her score is decremented by 0.5. When the student specifies a
negative
 number, he/she will not be given any more chances to correct his or
her
 mistake and his/her score will be decremented by 1. So a student's
turn
comes to an end when he/she has correctly specified 3 positive odd
numbers
or when the student has specified a negative number.

Few students didn't know the difference between odd numbers and even
numbers
 and they made many mistakes and so it was difficult for the teacher to
maintain the scores. The teacher asks for your help.

Can you please help her by writing a program to calculate the score?

Input Format:
Input consists of a list of integers.

Output Format:
Output consists of a single line. The score needs to be displayed
correct to
 1 decimal place. Refer sample output for details.

[For this exercise, don't worry about duplicate odd numbers. Even if
the
students specifies the same odd number thrice, it is accepted].

Sample Input 1:
1
3
5
Sample Output 1:
3.0

Sample Input 2:
1
2
5
6

7
Sample Output 2:
2.0

Sample Input 3:
2
-4
Sample Output 3:
-1.5

Sample Input 4:
3
3
3
Sample Output 4:
3.0
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8. Drona normally trains his disciples using a board which consists of
concentric circles. When the student correctly hits the center of the
concentric circles, his score is 100. The score gets reduced depending
on
 where the students hit on the board. When the student hits outside the
board,
 his score is 0. Drona will not allow a student to have his food unless
he
scores 100. Arjuna will always hit the target in his first attempt and
he
 will leave early.
Others may take more turns to reach the score of 100.
Can you write a program to determine the number of turns a disciple
takes
 to reach the target score of 'n' ?

Input Format:
Input consists of a list of positive integers. The first integer
corresponds
 to the target score 'n'. Assume that all the other integers input are
less
than or equal to n.

Output Format:
Output consists of a single line. Refer sample output for format
details.

Sample Input 1:
100
4
40
60
Sample Output 1:
The number of turns is 3

Sample Input 2:
1000
1000
Sample Output 2:

The number of turns is 1

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9. Write a java program to print all numbers between a and b
 (a and b inclusive) using a for loop.

Input Format:
Input consists of 2 integers. The first integer corresponds to a and
the
second integer corresponds to b. Assume a<=b.

Output Format:
Refer Sample Input and Output for formatting specifications.

Sample Input and Output:
Enter the value of a
4
Enter the value of b
10
Output:
4
5
6
7
8
9
10

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10. The environmental eco club has discovered a new Amoeba that grows
in the
 order of a Fibonacci series every month. They are exhibiting their
amoeba
in a national conference. They want to know the size of the amoeba at a
particular time instant. If a particular month's index is given can you
 write a program that displays the amoeba's size……???

Note: The size of the amoeba on month 1, 2, 3, 4, 5, 6, .. will be 0,
1, 1, 2,
 3, 5, 8 respectively.

Sample input and Output 1:

Enter the number of Months :
7
The amoeba size is 8

Sample input and Output 1:
Enter the number of Months :
12
The amoeba size is 89