Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 1

Problem

Problem Description:
Binita is playing a chess. The game will be played on a rectangular grid consisting of N rows and M columns.

Initially all the cells of the grid are uncolored.

Binita's initial score is zero. At each turn, he chooses some cell that is yet not colored, and colors that cell.

The score obtained in this step will be number of neighboring colored cells of the cell that Binita colored in this step.

Two cells are neighbors of each other if they share a side between them.

The game will end when all the cells are colored.

Finally, total score obtained at the end of the game will sum of score obtained in each turn. Binita wants to know what maximum score he can get?

Can you please help her in finding this out?

Constraints:
$1 \leq N, M \leq 50$

Input Format:
The Only line of input contains two space-separated integers N, M denoting the dimensions of the grid.

Output Format:
Print the output a single line containing an integer corresponding to the maximal possible score Binita can obtain.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010096 {
        public static void main(String[] args) {
         Scanner input = new Scanner(System.in);
         int n = input.nextInt();
         int m = input.nextInt();
          int ans = m*(n-1) + n*(m-1);
          System.out.println(ans);
        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 2

Problem

Problem description:

Nathan works as an HR in a private company.

He had an opportunity to interview students from various disciplines.

He asked the candidates to perform the addition of two floating point numbers given by him an to print the output with three values after decimal point.

But the student failed a math test on adding two numbers. So many students could not complete the first round.

One day Nathan is invited as a chief placement trainer in a reputed engineering college.

He would like to know how many students are capable of solving the same problem.

Can you solve the problem and prove him that you are capable of solving it?

Constraints:

$1.00 \leq var1 \leq 25000.00$

$1 \leq var2 \leq 25000.00$

Input Format:

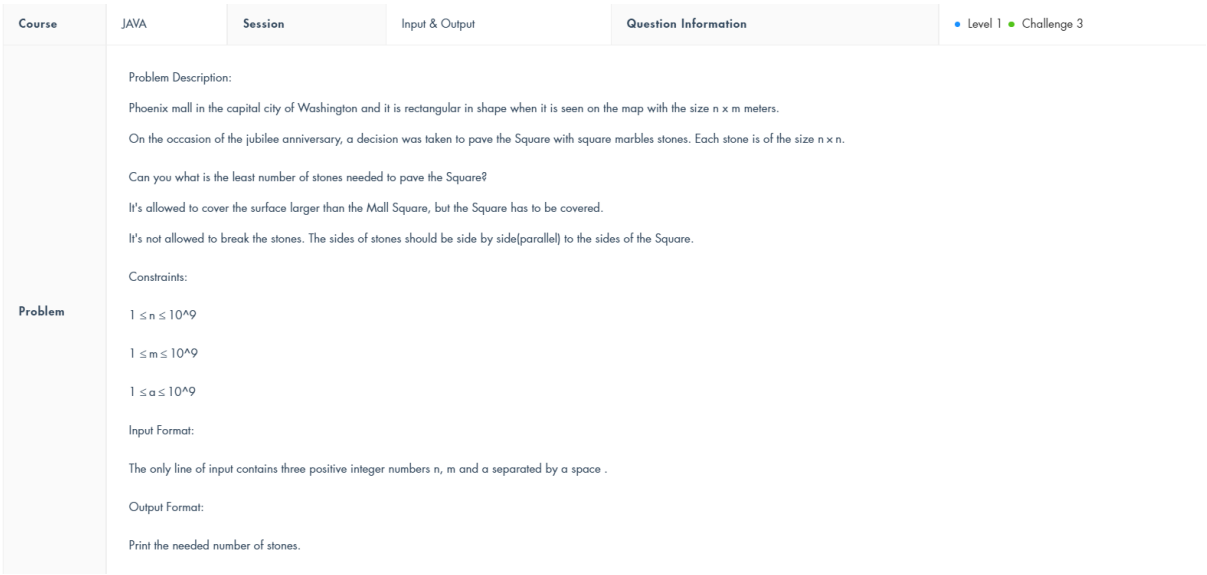
The only line of input has two input values of type float separated by a space.

Output Format:

In the only line of output print the sum of two numbers with three values after decimal point

```
import java.io.*;
import java.util.Scanner;
```

```
public class Class232241010096 {
        public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        float var1 = input.nextFloat();
        float var2 = input.nextFloat();
        float ans=var1+var2 ;
        String str=String.format("%.3f",ans);
        System.out.println(str);
        }
}
```



Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 3

Problem

Problem Description:

Phoenix mall in the capital city of Washington and it is rectangular in shape when it is seen on the map with the size n x m meters.

On the occasion of the jubilee anniversary, a decision was taken to pave the Square with square marbles stones. Each stone is of the size n x n.

Can you what is the least number of stones needed to pave the Square?

It's allowed to cover the surface larger than the Mall Square, but the Square has to be covered.

It's not allowed to break the stones. The sides of stones should be side by side(parallel) to the sides of the Square.

Constraints:

$1 \le n \le 10^9$

$1 \le m \le 10^9$

$1 \le a \le 10^9$

Input Format:

The only line of input contains three positive integer numbers n, m and a separated by a space .

Output Format:

Print the needed number of stones.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010096 {
        public static void main(String[] args) {
    Scanner input = new Scanner(System.in);
    int n = input.nextInt();
    int m = input.nextInt();
    int a = input.nextInt();
            System.out.println(((n+a-1)/a)*((m+a-1)/a));
        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 4
Problem	Problem Description: Nancy bought apples in a fruit shop. The shop keeper specified the the bill amount. Nancy also given some amount to the shop keeper for paying the bill. But she likes to know the quotient and remainder after dividing the amount given by her by the bill amount specified by shop keeper. Can you help nancy in finding it? Constraint : 5 ≤ amtgiven≤ 2500 5 ≤ billamt ≤ 2500 Input Format: First Line: Integer value of amtgiven representing the amount given by nancy. Second Line: Integer value of billamt representing the amount specified by the shop keeper Output Format First Line: Print the Quotient in integer format. Second Line: Print the Remainder in integer format.				

```
import java.io.*;
import java.util.Scanner;
public class Class232241010096 {
	public static void main(String[] args) {
		Scanner input = new Scanner(System.in);
		int amtgiven = input.nextInt();
		int billamt = input.nextInt();
		int Remainder=amtgiven%billamt;
		int Quotient=amtgiven/billamt;
		System.out.println("Quotient:"+Quotient);
		System.out.println("Remainder:"+Remainder);
	}
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 5

Problem

Problem Description:

Selvan was playing with the a object of random size for stress relief.

Selvan knows that the Length, Width, and Height of the object.

But he would like to know the surface area of the object he is playing with.

Can you help him in finding it?

Functional Description:
Surface area of the Object = 2 x [width x length + length x height + height x width]

Constraints:
1 ≤ width ≤ 10

1 ≤ height ≤ 10

Input Format:

First Line : Length of the object in Integer.

Second Line : Width of the object in Integer

Third Line : Height of the object in Integer

Output Format:

Print a single integer value representing the surface area of the object selvam is playing with.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010096 {
        public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int length = input.nextInt();
        int width = input.nextInt();
        int height = input.nextInt();
        System.out.println(2*(width*length+length*height+width*height));
       }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 6

Problem

Problem Description:

Elavenil has a chessboard with N rows and M columns. In one step, he can choose two cells of the chessboard which share a common edge (that has not been cut yet) and cut this edge.

Formally, the chessboard is *split* into two or more pieces if it is possible to partition its cells into two non-empty subsets S1 and S2 ($S1 \cap S2 = \emptyset$, $|S1| + |S2| = NM$) such that there is no pair of cells $c1, c2$ ($c1 \in S1, c2 \in S2$) which share a common edge that has not been cut.

Elavenil does not want the board to split into two or more pieces.

Compute the maximum number of steps he can perform while satisfying this condition.

Constraints:

$1 \le N, M \le 8$

Input Format:

The only line of input test case contains two space-separated integers N and M.

Output Format:

In the only line of output print an integer representing the maximum possible number of steps.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010096 {
```

```
        public static void main(String[] args) {
          Scanner input = new Scanner(System.in);
          int n = input.nextInt();
          int m = input.nextInt();
          System.out.println((m-1)*(n-1));
        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 7

Problem

Problem Description:

The employees of one million dollar profit company TeamZilla organised the strike because they want to have additional salary increment, the strike is continuing for more than a month now.

Rathik the CEO of TeamZilla has found the solution to break the strike, so he organised a small technical competition for his employees.

Most of the employees who were part of the strike have participated in the technical event announced and in that there was a task of printing the ASCII Value of the character inputted.

Can you help them to complete the task and win the competition?

Constraint:
$a \leq Asc \leq z$
$A \leq Asc \leq Z$

Input format:

Only Line of input represents a single alphabetic character.

Output format:

Print the integer ASCII value corresponding to the input alphabet.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010096{
        public static void main(String[] args) {
    Scanner input = new Scanner(System.in);
    char Asc=input.next().charAt(0);
    System.out.println(Asc-0);
        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 8

Problem

Problem Description:

The Electricity Officer has mentioned the total counts of unit and amount.

The officer inform the customer the bill amount in a unique format.

The format given by electricity officer as follow:

But customers are finding the difficult to find the exact amount that needs to be paid.

Can you help the customers?

Functional Description:

Total Bill Amount = unitconsumed ^ costperunit

Constraints:
$1 \leq$ unitconsumed ≤ 500
$2 \leq$ costperunit ≤ 10

Input Format :
The first line of input represents the integer value of unitconsumed
The second line of input represents the integer value of costperunit

Output Format:
Print the total Bill amount in single line.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010096 {
	public static void main(String[] args) {
		Scanner input = new Scanner(System.in);
		int costperunit = input.nextInt();
		int unitconsumed = input.nextInt();
		System.out.println(Math.pow(costperunit,unitconsumed));
	}
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 9

Problem

Problem Description:

Binita was travelling from Chennai to Delhi in Rajdhani Express.

The train have arrived at the destination later than the estimated time.

So, Binita wants to know the total number of hours and minutes the train was delayed.

Can you help Binita in finding the exact hour and time Rajdhani Express was delay on the day of Binita's journey?

Constraint:
$100 \leq$ tot_mins ≤ 550

Input Format:

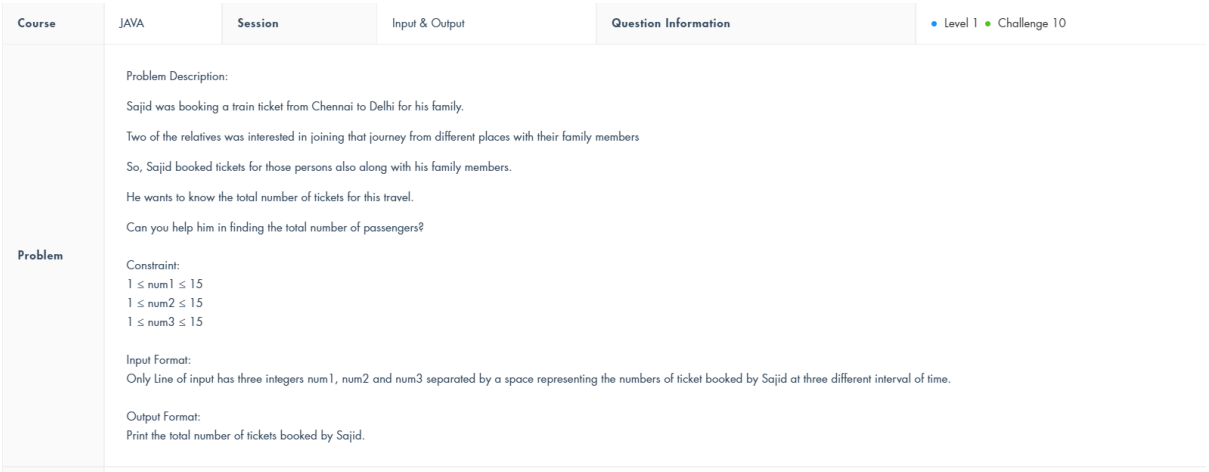
The only line of input has single value of variable tot_mins of type integer representing total minutes.

Output Format:

Print the Number of Hours and Minutes in a single line.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010096 {
	public static void main(String[] args) {
```

```
                Scanner input = new Scanner(System.in);
                int tot_mins = input.nextInt();
                System.out.println(tot_mins/60 +  " Hours and " + tot_mins%60 + " Minutes");
        }
}
```



Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 10

Problem

Problem Description:

Sajid was booking a train ticket from Chennai to Delhi for his family.

Two of the relatives was interested in joining that journey from different places with their family members

So, Sajid booked tickets for those persons also along with his family members.

He wants to know the total number of tickets for this travel.

Can you help him in finding the total number of passengers?

Constraint:
$1 \leq num1 \leq 15$
$1 \leq num2 \leq 15$
$1 \leq num3 \leq 15$

Input Format:
Only Line of input has three integers num1, num2 and num3 separated by a space representing the numbers of ticket booked by Sajid at three different interval of time.

Output Format:
Print the total number of tickets booked by Sajid.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010096 {
        public static void main(String[] args) {
                Scanner input = new Scanner(System.in);
                int num1=input.nextInt();
                int num2=input.nextInt();
                int num3=input.nextInt();
                System.out.println(num1+num2+num3);
        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 1

Problem

Problem Description:

Professor JD has lots of options.

Bottles containing all types of potions are stacked on shelves which cover the entire wall from floor to ceiling.

Professor JD has broken his bones several times while climbing the top shelf for retrieving a potion.

He decided to get a ladder for him.

But he has no time to visit Charu.

So he instructed Bargav to make a ladder for him. Professor JD specifically wants a step ladder that looks like an inverted 'V' from a side view.

Professor just mentioned two things before vanishing-

B - separation between left side (LS) and right side (RS) on the ground

LS - the length of left side

What should be the length of RS? At one extreme LS can be vertical and at other RS can be vertical.

Bargav is angry and confused.

Can you help him find the minimum and maximum length of RS.

Constraints

$1 \leq B < LS \leq 100$

Input Format:

Only line of input contains2 integers representing B and LS respectively.

Output Format:

The only ;line of output contains minimum value of RS and maximum value of RS, separated by space.

```
import java.util.Scanner;
public class Class232241010020 {
        public static void main(String[] args) {
         float b,ls;
         Scanner input = new Scanner(System.in);
         b = input.nextFloat();
         ls = input.nextFloat();
         double rs1=(double)Math.sqrt(ls*ls-b*b);
         double rs2=(double)Math.sqrt(ls*ls+b*b);
         System.out.format("%.5f",rs1);
         System.out.print(" ");
         System.out.format("%.5f",rs2);
         System.out.println();

        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 2
Problem	Problem Description: Tina's brother gave her a friendly task of calculating the number of squares in a board that has n*n squares of dimensions 1cm * 1cm each. Help her to find the number of total squares including all small and big ones. Constraints: 2 ≤ n ≤ 20 Input Format: The only line of the input represents a value of "n" Output Format: Print the number of squares in the n*n board."				

```
import java.io.*;
import java.util.Scanner;
public class Class232241010020 {
        public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int n = input.nextInt();
   int  x=(n*(n+1)/2)*(2*n+1)/3;
        System.out.println(x);
        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 3
Problem	Problem Description: During the IPL Match between CSK and MI, as a part of IPL contest the question was asked to the fans. Who are all giving the correct answer to that question will get the free VIP box ticket for the Final for which CSK have already qualified . The question is convert given integer number to octal and hexadecimal number respectively. Abilash is an die heart CSK fan. Can you help him answer the question so that he can watch CSK play the final from VIP box? Constraints: 1≤iplno≤10000 Input Format: Only line of input has single integer number that need to be converted. Output Format: In the First line of output print the octal number equivalent to the input value. In the Second line of output print the hexadecimal number equivalent to the input value.				

```
import java.util.Scanner;
public class Class232241010020{
        public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int iplno = input.nextInt();
                String octal=Integer.toOctalString(iplno);
```

```
            String hexadecimal=Integer.toHexString(iplno);
            System.out.println(octal+"\n"+hexadecimal);

        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 4

Problem

Problem Description:

Tina's trainer have given her two positive integers U and V.

Now her task is ti find the number of pairs of positive integers (X,Y) such that $1 \le X \le U$, $1 \le Y \le V$ and X+Y is even.

Tina is finding difficult to understand the problem.

Can you help her solving the problem?

Constraints

$1 \le A,B \le 75$

Input Format:

The only line of each test case contains two space-separated integers U and V.

Output Format:

In the only line of output print a single line containing one integer that represents the the number of valid pairs.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010020{
        public static void main(String[] args) {
            Scanner input = new Scanner(System.in);
            int U = input.nextInt();
            int V = input.nextInt();
            int s = U*V/2 + ((U%2)*(V%2));
            System.out.println(s);

        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 5

Problem

Problem Description:

Nancy bought apples in a fruit shop.

The shop keeper specified the the bill amount. Nancy also given some amount to the shop keeper for paying the bill.

But she likes to know the quotient and remainder after dividing the amount given by her by the bill amount specified by shop keeper.

Can you help nancy in finding it?

Constraint :

$5 \leq amtgiven \leq 2500$

$5 \leq billamt \leq 2500$

Input Format:

First Line: Integer value of amtgiven representing the amount given by nancy.

Second Line: Integer value of billamt representing the amount specified by the shop keeper

Output Format

First Line: Print the Quotient in integer format.

Second Line: Print the Remainder in integer format.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010020{
public static void main(String[] args) {
                Scanner input = new Scanner(System.in);
                int amtgiven = input.nextInt();
                int billamt = input.nextInt();
                System.out.println("Quotient:"+amtgiven/billamt);
                System.out.println("Remainder:"+amtgiven%billamt);

        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 6

Problem

Problem Description:

Elavenil runs a popular bakery in her native.

Elavenil has now finished baking and frosting her cupcakes, it's time to package them.

Elavenil has N cupcakes, and needs to decide how many cupcakes to place in each package.

Each package must contain the same number of cupcakes.

Elavenil will choose an integer A between 1 and N, inclusive, and place exactly A cupcakes into each package.

Elavenil makes as many packages as possible.

Elavenil then gets to eat the remaining cupcakes.

Elavenil enjoys eating cupcakes very much.

Help Elavenil choose the package size A that will let him eat as many cupcakes as possible.

Constraints:

$2 \leq N \leq 10000$

Input Format:

Only line of input consists of a single integer N representing the number of cupcakes.

Output Format:

Print the package size that will maximize the number of leftover cupcakes.

If multiple package sizes will result in the same number of leftover cupcakes, print the largest such size.

```
import java.util.Scanner;
public class Class232241010020 {
        public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int n = input.nextInt();
        System.out.println((int)Math.floor(n/2)+1);
        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 7

Problem

Problem Description:

Phoenix mall in the capital city of Washington and it is rectangular in shape when it is seen on the map with the size n x m meters.

On the occasion of the jubilee anniversary, a decision was taken to pave the Square with square marbles stones. Each stone is of the size n x n.

Can you what is the least number of stones needed to pave the Square?

It's allowed to cover the surface larger than the Mall Square, but the Square has to be covered.

It's not allowed to break the stones. The sides of stones should be side by side(parallel) to the sides of the Square.

Constraints:

$1 \leq n \leq 10^9$

$1 \leq m \leq 10^9$

$1 \leq a \leq 10^9$

Input Format:

The only line of input contains three positive integer numbers n, m and a separated by a space .

Output Format:

Print the needed number of stones.

```
import java.util.Scanner;
public class Class232241010020 {
```

```
        public static void main(String[] args) {
            Scanner input = new Scanner(System.in);
            int n = input.nextInt();
            int m = input.nextInt();
    int a = input.nextInt();
    System.out.println(((n+a-1)/a)*((m+a-1)/a));
        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 8

Problem

Problem Description:

The employees of one million dollar profit company TeamZilla organised the strike because they want to have additional salary increment, the strike is continuing for more than a month now.

Rathik the CEO of TeamZilla has found the solution to break the strike, so he organised a small technical competition for his employees.

Most of the employees who were part of the strike have participated in the technical event announced and in that there was a task of printing the ASCII Value of the character inputted.

Can you help them to complete the task and win the competition?

Constraint:
a ≤ Asc ≤ z
A ≤ Asc ≤ Z

Input format:

Only Line of input represents a single alphabetic character.

Output format:

Print the integer ASCII value corresponding to the input alphabet.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010020 {
        public static void main(String[] args) {
    Scanner input = new Scanner(System.in);
    char Asc=input.next().charAt(0);
    System.out.println(Asc-0);



        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 9

Problem

Problem Description:

Rebecca bought a new volleyball in the sports shop. It looks like a medium size.

She somehow found the radius of the sphere.

But she would like to know the volume of that ball.

Can you help him in finding the Volume of the ball?

Functional Description:

Volume = (4.0/3.0) × π × r^3
π = 3.14

Constraint:
1.00 ≤ r ≤ 5.00

Input Format :
The only line of input has a single value of type float representing the radius of the ball.

Output Format:
Print the volume of the ball in a single line.

```
import java.util.*;
import java.text.DecimalFormat;
class Class232241010020 {
    static  DecimalFormat obj = new DecimalFormat("0.000000");
            public static void main(String[] args) {
                    Scanner input = new Scanner(System.in);
                    float radiusofball = input.nextFloat();
                    double  vol =  4.0/3.0*3.14*radiusofball*radiusofball*radiusofball;
                    System.out.println(obj.format(vol));
            }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 10

Problem

Problem Description:

The Electricity Officer has mentioned the total counts of unit and amount.

The officer inform the customer the bill amount in a unique format.

The format given by electricity officer as follow:

But customers are finding the difficult to find the exact amount that needs to be paid.

Can you help the customers?

Functional Description:

Total Bill Amount = unitconsumed ^ costperunit

Constraints:
1 ≤ unitconsumed ≤ 500
2 ≤ costperunit ≤ 10

Input Format :
The first line of input represents the integer value of unitconsumed
The second line of input represents the integer value of costperunit

Output Format:
Print the total Bill amount in single line.

```
import java.io.*;
```

```
import java.util.Scanner;
public class Class232241010020 {
        public static void main(String[] args) {
            Scanner input = new Scanner(System.in);
                int costperunit = input.nextInt();
                int unitconsumed = input.nextInt();
                System.out.println(Math.pow(costperunit,unitconsumed));
        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 1

Problem

Problem Description:

The employees of one million dollar profit company TeamZilla organised the strike because they want to have additional salary increment, the strike is continuing for more than a month now.

Rathik the CEO of TeamZilla has found the solution to break the strike, so he organised a small technical competition for his employees.

Most of the employees who were part of the strike have participated in the technical event announced and in that there was a task of printing the ASCII Value of the character inputted.

Can you help them to complete the task and win the competition?

Constraint:
a ≤ Asc ≤ z
A ≤ Asc ≤ Z

Input format:

Only Line of input represents a single alphabetic character.

Output format:

Print the integer ASCII value corresponding to the input alphabet.

```
import java.util.Scanner;
public class Class232241010042{
        public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        char Asc = input.next().charAt(0);
        int ch = Asc ;
        System.out.println(ch);



        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 2

Problem

Problem Description:
Binita is playing a chess. The game will be played on a rectangular grid consisting of N rows and M columns.

Initially all the cells of the grid are uncolored.

Binita's initial score is zero. At each turn, he chooses some cell that is yet not colored, and colors that cell.

The score obtained in this step will be number of neighboring colored cells of the cell that Binita colored in this step.

Two cells are neighbors of each other if they share a side between them.

The game will end when all the cells are colored.

Finally, total score obtained at the end of the game will sum of score obtained in each turn. Binita wants to know what maximum score he can get?

Can you please help her in finding this out?

Constraints:
$1 \leq N, M \leq 50$

Input Format:
The Only line of input contains two space-separated integers N, M denoting the dimensions of the grid.

Output Format:
Print the output a single line containing an integer corresponding to the maximal possible score Binita can obtain.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010042 {
        public static void main(String[] args){
            Scanner input = new Scanner(System.in);
            int n = input.nextInt();
            int m = input.nextInt();
            int ans = ((n-1)*(m-1)*2+m+n-2);
            System.out.println(ans);

        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 3

Problem

Problem Description:

Selvan was playing with the a object of random size for stress relief.

Selvan knows that the Length, Width, and Height of the object.

But he would like to know the surface area of the object he is playing with.

Can you help him in finding it?

Functional Description:
Surface area of the Object = 2 x [width x length + length x height + height x width]

Constraints:
$1 \leq$ width ≤ 10

$1 \leq$ height ≤ 10

Input Format:

First Line : Length of the object in Integer.

Second Line : Width of the object in Integer

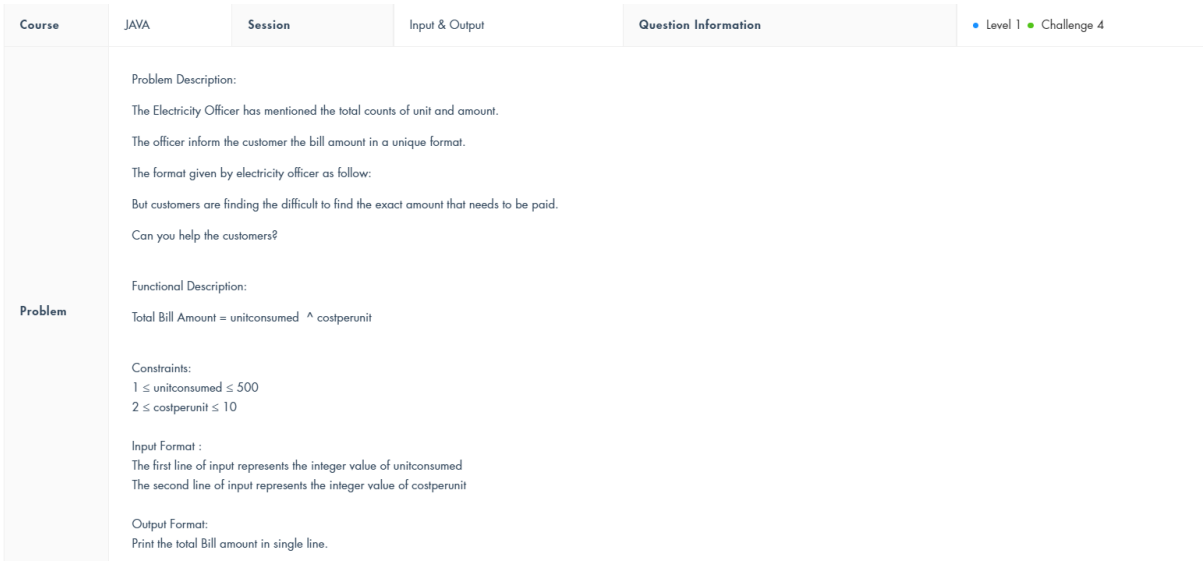
Third Line : Height of the object in Integer

Output Format:

Print a single integer value representing the surface area of the object selvam is playing with.

```
import java.io.*;
import java.util.*;


public class Class232241010042{
   public static void main(String[] args) {
   Scanner input = new Scanner(System.in);
      int length = input.nextInt();
      int width = input.nextInt();
      int height = input.nextInt();
      int surfacearea;
      surfacearea = 2*(width*length+length*height+height*width);
      System.out.println(surfacearea);
          }
}
```



Course	JAVA	Session	Input & Output	Question Information	Level 1 • Challenge 4

Problem

Problem Description:

The Electricity Officer has mentioned the total counts of unit and amount.

The officer inform the customer the bill amount in a unique format.

The format given by electricity officer as follow:

But customers are finding the difficult to find the exact amount that needs to be paid.

Can you help the customers?

Functional Description:

Total Bill Amount = unitconsumed ^ costperunit

Constraints:
1 ≤ unitconsumed ≤ 500
2 ≤ costperunit ≤ 10

Input Format :
The first line of input represents the integer value of unitconsumed
The second line of input represents the integer value of costperunit

Output Format:
Print the total Bill amount in single line.

```
import java.util.Scanner;
public class Class232241010042 {
          public static void main(String[] args) {
             Scanner input = new Scanner(System.in);
             int costperunit = input.nextInt();
             int unitconsumed = input.nextInt();
             System.out.println(Math.pow(costperunit,unitconsumed));
```

```
        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 5

Problem

Problem Description:
Arif came from a very low income family.

However, his father Irfan, sent him abroad for the purpose of studying.

Arif also concentrated well in his learning keeping in mind his father's poverty.

Arif was excellent in mathematics.

One day Arif had a computer class and his computer teacher asked him to create a programming logic for the mathematics problem of multiplying two numbers of type float.

Constraints:
1.00≤ var1 ≤1000.00
1.00≤ var2≤1000.00

Input Format:
The only line of input has two floating point numbers separated by space

Output Format:
In the only line of output print the result of the multiplication with 4 values after decimal point.

```
import java.io.*;
import java.util.Scanner;
import java.lang.*;
public class Class232241010042 {
        public static void main(String[] args) {
            Scanner input = new Scanner(System.in);
            float val1 = input.nextFloat();
            float val2 = input.nextFloat();
            System.out.println(String.format("%.4f",val1*val2));
        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 6

Problem

Problem description:

Nathan works as an HR in a private company.

He had an opportunity to interview students from various disciplines.

He asked the candidates to perform the addition of two floating point numbers given by him an to print the output with three values after decimal point.

But the student failed a math test on adding two numbers. So many students could not complete the first round.

One day Nathan is invited as a chief placement trainer in a reputed engineering college.

He would like to know how many students are capable of solving the same problem.

Can you solve the problem and prove him that you are capable of solving it?

Constraints:

$1.00 \leq var1 \leq 25000.00$

$1 \leq var2 \leq 25000.00$

Input Format:

The only line of input has two input values of type float separated by a space.

Output Format:

In the only line of output print the sum of two numbers with three values after decimal point

Refer sample input and output

```
import java.io.*;
import java.util.Scanner;
public class Class232241010042 {
        public static void main(String[] args) {
            Scanner input = new Scanner(System.in);
            float var1 = input.nextFloat();
            float var2 = input.nextFloat();
            float add = var1 + var2 ;
            System.out.format("%.3f",add);

        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 7

Problem

Problem Description:

Tina's brother gave her a friendly task of calculating the number of squares in a board that has n*n squares of dimensions 1cm *1cm each.

Help her to find the number of total squares including all small and big ones.

Constraints:

$2 \leq n \leq 20$

Input Format:

The only line of the input represents a value of "n"

Output Format:

Print the number of squares in the n*n board."

```
import java.io.*;
import java.util.Scanner;
```

```
public class Class232241010042 {
        public static void main(String[] args) {
            Scanner input = new Scanner(System.in);
            int n = input.nextInt();
            int x = (n*(n+1)/2)*(2*n+1)/3;
            System.out.println(x);

        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 8
Problem	Problem Description: Rathik organized technical round interview in Macrosoft for the set of computer science candidates. The problem is to perform addition, subtraction, multiplication, and division of given two numbers. Rathik have given the deadline of only 5 minutes to complete the problem. Can you Help the candidates to complete the problem within the specified time limit ? Constraint: $1 \leq$ testnum1 ≤ 50 $1 \leq$ testnum2 ≤ 50 Input Format : The only line of input has two numbers a and b of type integers separated by a comma. Output Format: Print Addition, Subtraction, Multiplication, Division, and Modulus of given two numbers in a separate line respectively. Note: Rathik instructed his candidates to print the result of the division with 3 values after decimal point.				

```
import java.util.Scanner;
public class Class232241010042 {
        public static void main(String[] args) {
            Scanner input = new Scanner(System.in);
            int testnum1 = input.nextInt();
            int testnum2 = input.nextInt();
            float v =(float) testnum1/testnum2;
            System.out.println("Addition : "+(testnum1+testnum2));
            System.out.println("Subtraction : "+(testnum1-testnum2));
            System.out.println("Multiplication : "+(testnum1*testnum2));
            System.out.println("Division : "+String.format("%.3f",v));
            System.out.println("Modulus : "+(testnum1%testnum2));

        }
```

}

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 9

Problem

Problem Description:

Elavenil has a chessboard with N rows and M columns. In one step, he can choose two cells of the chessboard which share a common edge (that has not been cut yet) and cut this edge.

Formally, the chessboard is *split* into two or more pieces if it is possible to partition its cells into two non-empty subsets S1 and S2 ($S1 \cap S2 = \emptyset$, $|S1| + |S2| = NM$) such that there is no pair of cells $c1, c2$ ($c1 \in S1, c2 \in S2$) which share a common edge that has not been cut.

Elavenil does not want the board to split into two or more pieces.

Compute the maximum number of steps he can perform while satisfying this condition.

Constraints:

$1 \leq N, M \leq 8$

Input Format:

The only line of input test case contains two space-separated integers N and M.

Output Format:

In the only line of output print an integer representing the maximum possible number of steps.

```
import java.io.*;
import java.util.Scanner;
public class Class232241010042 {
        public static void main(String[] args) {
           Scanner input = new Scanner(System.in);
           int n = input.nextInt();
           int m = input.nextInt();
           System.out.println((m-1)*(n-1));


        }
}
```

Course	JAVA	Session	Input & Output	Question Information	• Level 1 • Challenge 10

Problem

Problem Description:

Elavenil runs a popular bakery in her native.

Elavenil has now finished baking and frosting her cupcakes, it's time to package them.

Elavenil has N cupcakes, and needs to decide how many cupcakes to place in each package.

Each package must contain the same number of cupcakes.

Elavenil will choose an integer A between 1 and N, inclusive, and place exactly A cupcakes into each package.

Elavenil makes as many packages as possible.

Elavenil then gets to eat the remaining cupcakes.

Elavenil enjoys eating cupcakes very much.

Help Elavenil choose the package size A that will let him eat as many cupcakes as possible.

Constraints:

$2 \leq N \leq 10000$

Input Format:

Only line of input consists of a single integer N representing the number of cupcakes.

Output Format:

Print the package size that will maximize the number of leftover cupcakes.

If multiple package sizes will result in the same number of leftover cupcakes, print the largest such size.

```
import java.util.Scanner;
```

```
public class Class232241010042 {
        public static void main(String[] args) {
            Scanner input = new Scanner(System.in);
            int n = input.nextInt();
            System.out.println((int)Math.floor(n/2)+1);

        }
}
```