Effective Package

Rahul's friends always ask him about his salary. He always gets angry at these questions because they remind him of the enormous taxes he must pay.

Everyone must pay `10%` of their package as base_tax irrespective of their pay (below `2.5 million`). And some extra taxes depend on the package range, only applicable to package range between `100 thousand` and `2.5 million`. The general taxation rules are:

```
1. package < 100,000: base_tax
2. 100,000 <= package < 400,000: base_tax + 25,000
3. 400,000 <= package < 1,000,000: base_tax + 50,000
4. 1,000,000 <= package < 25,000,000: base_tax + 100,000
5. 25,000,000 <= package: 15% of entire package
```

Given a package amount, you need to print the effective package someone receives after tax deduction.

Input Format

A single integer representing the package amount.

Constraints

`package > 0`

Output Format

Integer representing effective package after tax deduction.

You need to print the value after rounding the number to its nearest integer.

Sample Input 0

```
50000
```

Sample Output 0

```
45000
```

Explanation 0

The package is `50,000`, so only the `base_tax` will be applicable. Here, the `base_tax` is `5,000`. On deducting this tax from the original package, the effective package becomes `45,000`

Sample Input 1

```
5000000
```

Sample Output 1

```
4250000
```

Explanation 1

The package is `5,000,000`, so only the `15%` of the original package will be deducted as tax. Here, the tax amount is `750000`. On deducting this tax from the original package, the effective package becomes `4250000`

Sample Input 2

```
100000
```

Sample Output 2

```
65000
```

Explanation 2

The package is `100,000`, so `base_tax + 25,000` will be the total tax amount. Here, the `base_tax` is `10,000`. On deducting this tax from the original package, the effective package becomes `65,000`

Contest ends in 12 days

Submissions: 0
Max Score: 20

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C

```c
#include <stdio.h>
#include <string.h>
#include <math.h>
#include <stdlib.h>

int main() {

    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    return 0;
}

```

Line: 1 Col: 1

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Shopping Mall

Let's suppose Aman went to a shopping mall for shopping. After shopping for items totalling ₹X, he realised he had forgotten to bring cash and was only carrying his Debit card. He can only pay with a debit card if his bank balance exceeds the total cost and the cost is a multiple of 5. For each successful withdrawal, the bank also charges ₹1. Print "YES" if he can item else Print "NO". Also, print the remaining bank balance after the transaction.

Input Format

Take 2 input from user a and b a is the initial balance b is the price of the item.

Constraints

1. 0 < a <= 100000,
2. 0 < b <= 10000

Remaining balance can never be negative

Output Format

First line will be either "YES" or "NO". second line will be remaining balance.

Sample Input 0

```
50 13
```

Sample Output 0

```
YES
36
```

Explanation 0

Aman initial balance would be 50 -->a

The price of item is 13 -->b As the a>b and a is the multiple of 5 We can bought this item, remaining balance is 50-13-1(transaction fees)=36

As we can do the operation YES will be printed and remaining balance 36 will be printed.

Sample Input 1

```
49 35
```

Sample Output 1

```
NO
49
```

Explanation 1

As the initial balance is not a multiple of 5 so we can't buy the item. So, NO will be printed and remaining balance would be printed.

Chocolate Problem

You want to buy X chocolate from the shop and you have ₹Y in your pocket. To get the first chocolate you have to pay ₹Z, to get the second chocolate you have to pay ₹2Z and so on, such that for i-th chocolate you have to pay ₹i·Z.

Print how many rupees you are short to buy X chocolate.

Input Format

Take three input from user in specific format X -> number of chocolate you want to buy. Y -> amount of money you have in pocket. Z -> price of chocolate at first day.

Constraints

1. 1<=X,Z<30
2. 0<=Y<10000

Output Format

Amount you are short to buy the chocolate.

Sample Input 0

```
4 20 3
```

Sample Output 0

```
10
```

Explanation 0

X=4, Y=20, Z=3, You have to buy 4 chocolate and the price of first chocolate is 3 and you total have ₹20 so, price at first day =₹3 price at second day =₹6 and so on. at the end you will be short of ₹10.

Sample Input 1

```
3 30 4
```

Sample Output 1

```
0
```

Explanation 1

X=3, Y=30, Z=4, You have to buy 3 chocolate and the price of first chocolate is 4 and you total have ₹30 so, price at first day =₹4 price at second day =₹8 and so on. at the end you will be short of ₹0 as you have amount to buy X chocolate so output 0.

Pattern Printing

Problem Submissions Leaderboard

Print the pattern given

Input Format

N will be number of line

Constraints

1<=N<=20

Output Format

Print the pattern

Sample Input 0

```
1
```

Sample Output 0

```
#
```

Sample Input 1

```
4
```

Sample Output 1

```
#$#$
$#$#
#$#$
$#$#
```

Sample Input 2

```
3
```

Sample Output 2

```
#$#
$#$
#$#
```


C

```
1 #include <stdio.h>
2 #include <string.h>
```

Longest Side

Given `3` points in a 2D space, represented by their Cartesian coordinates, construct a triangle. Let the sides of the triangle be `AB`, `BC` and `CA`. You need to print the value of the longest side of this triangle. If no valid triangle can be constructed, print `-1`.

Input Format

Three points `A, B, C` separated by new line.

Individual points are provided by spaced separated integers.

Example:

```
1 2
3 4
5 6
```

The point `A` is `(1, 2)`, where `1` is the x-coordinate and `2` is the y-coordinate. Similarly,

`B -> (3, 4)`

`C -> (5, 6)`

Constraints

- -1000 <= x-coordinate, y-coordinate <= 1000
- Both x and y coordinates are integers

Output Format

Print the value of the longest side with precision of `2` decimal points.

If no triangle can be constructed, print `-1`

Sample Input 0

```
0 0
0 4
2 2
```

Sample Output 0

```
4.00
```

Sample Input 1

```
0 0
0 1
0 2
```

Sample Output 1