Practical

Digit Sum 2

The program's input is a two-digit number (do not check that fact, just assume it to be true). Output the sum of its digits.

Sample Input	Sample Output
15	6
78	15
20	2

Trinomial

The program input consists of 4 integer numbers: a, b, c, x_o .Output the value of a trinomial ax^2+bx+c in the point x_0.

Sample Input	Sample Output
1 1 1 -2	3
-1 2 1 3	-2
5 6 7 0	7

Round Number

The program's input is a float positive number. Round up the given number to the closest integer and output.
Important: Do not use ready function round().

Sample Input	Sample Output
2.7	3
11.2	11
0.5	1
0.1	0

Swap

Complete the missing part of code.

```
a = input()
b = input()

print("Initial value of variable a:", a)
print("Initial value of variable b:", b)

# Your code starts here

...

# Your code ends here

print("Swapped value of variable a:", a)
print("Swapped value of variable b:", b)
```

Sample Input	Sample Output

hello world	Initial value of variable a: hello Initial value of variable b: world Swapped value of variable a: world Swapped value of variable b: hello

Balls

The box contains multi-colored balls. All balls are the same shape, size and weight. Balls can be one of N different colors. There are many balls of each color in the box.

The program input consists of one positive integer: N - the number of possible colors. Output the minimum number of balls that can be pulled out of the box without looking, so that among them there are guaranteed to be two balls of the same color. It is guaranteed that N >= 1.

Sample Input	Sample Output
3	4

Arithmetic Progression 2

The input of the program consists of five integer numbers: n, a_n, m, a_m and k. a_n is the n-th member of an arithmetic progression, a_m is the m-th. You may assume that all n, m and k are positive, n < m and the progression consists only of whole numbers. Output the k-th member of the progression.

Hint: Use the equations $a_n=a_1 + (n-1)d$ and $a_m=a_1 + (m-1)d$ to get the values a_1 and d, after which use the same formula $a_k=a_1 + (k-1)d$ to obtain the needed value. Use new variables to store any intermediate results.

Sample Input	Sample Output

4 4 7 7 9	9.0
2 9 4 17 1	5.0
1 10 5 30 4	25.0