

Question 2

Correct

Mark 1.00 out of 1.00

You are choreographing a circus show with various animals. For one act, you are given two kangaroos on a number line ready to jump in the positive direction.

- The first kangaroo starts at position x_1 and moves at a speed v_1 meters per jump.
- The second kangaroo starts at position x_2 and moves at a speed of v_2 meters per jump and $x_2 > x_1$
- You have to figure out to get both kangaroos at the same position at the same time as part of the show before k jumps. If it is possible, return YES, otherwise return NO.

Input Format:

x_1 -position of kangaroo1

v_1 -Speed of kangaroo1

x_2 -position of kangaroo2

v_2 -Speed of kangaroo2

k -jumps

Output Format:

Both kangaroos are at the same position within k jumps, YES, otherwise NO.

For example:

Input	Result
0 3 4 2 6	YES

Answer: (penalty regime: 0 %)

```
1 x1=int(input())
2 v1=int(input())
3 x2=int(input())
4 v2=int(input())
5 k=int(input())
6
7 def kangaroo_jump(x1,v1,x2,v2,k):
8     if x2<x1 and v2<=v1:
9         return "NO"
10    else:
11        jumps_needed=(x2-x1)/(v1-v2)
12        if jumps_needed<=k and jumps_needed.is_integer() and jumps_needed>=0:
13            return "YES"
14        else:
15            return "NO"
16 print(kangaroo_jump(x1,v1,x2,v2,k))
17
18
```

	Input	Expected	Got	
✓	0	YES	YES	✓
	3			
	4			
	2			
	6			
✓	0	NO	NO	✓
	3			
	2			
	4			
	8			

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.



Question **3**

Correct

Mark 1.00 out of 1.00

Write a program that reads a positive integer, n, from the user and then displays the sum of all of the integers from 1 to n.

Sample Input

10

Sample Output

The sum of the first 10 positive integers is 55.0

For example:

Input	Result
10	The sum of the first 10 positive integers is 55.0

Answer: (penalty regime: 0 %)

```

1
2 def integer(n):
3     if n<0:
4         print("Enter positive integer")
5     elif n==0:
6         print("The sum of the first",n,"positive integers is 0.0")
7     else:
8         sum=0
9         for i in range(n+1):
10            sum+=i
11            print("The sum of the first",n,"positive integers is",float(sum))
12
13 n=int(input())
14 integer(n)

```

	Input	Expected	Got	
✓	10	The sum of the first 10 positive integers is 55.0	The sum of the first 10 positive integers is 55.0	✓
✓	20	The sum of the first 20 positive integers is 210.0	The sum of the first 20 positive integers is 210.0	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.