Remaining Submissions	
Problem	Count
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Coding Area

A B

ONLINE EDITOR (A)

GearBox

Problem Description

Let's say you are a mechanical engineer. Help solve the following problem statement. Given 3 mechanical gears that are connected to each other as depicted in the image below, find out how many times Gear3 will rotate given the radius of all three gears, and the number of times Gear1 is rotated.

For better understanding refer to Examples section.

Note: Test cases are designed in such a way that output will always be an integer value.

Constraints

0 < R1, R2, R3 < 50

0 < N < 10000

Input

The input has 2 lines.

The first line contains 3 space separated integers R1, R2, R3 which denote the radius of Gear1, Gear2 and Gear3 respectively.

The second line contains an integer N which denotes number of times Gear1 is rotated

Output

Print an integer denoting number of times Gear3 will rotate.

Time Limit

1

Explanation

Example 1

Input

1 10 1

100

Output

100

Explanation:

We are given R1 = 1, R2 = 10, R3 = 1

If we rotate Gear1 100 times, Gear3 will rotate 100 times

Example 2

Input

1 18 36

1800

Output

50

Explanation:

We are given R1 = 1, R2 = 18, R3 = 36

If we rotate Gear1 1800 times, Gear3 will rotate 50 times

Upload Solution [Question : A]

☐ I, **sreejit dey** confirm that the answer submitted is my own.

☐ Took help from online sources (attributions)

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