Medals

Marin will participate b years in a row in one olympiad. He knows he can earn a medal at any of them, but at the same time he is well aware that different years are independent competitions and the result of one year does not affect his subsequent performances. Medals of n types are awarded at the competition - gold, silver, bronze, diamond, platinum, etc. His favorite number is d, and he wants for every type of medal to have a number that is a multiple of d. He has already found in how many ways this can be done, but now he challenges you to find the value as well.

Input

The only line of the file **medals.in** contains the numbers n, b and d.

Output

Print in the file **medals.out** the number of ways modulo $10^9 + 7$.

Constraints

$1 \le b \le 1000$
$1 \le n \le 30$
$1 \le d \le 4$

Time limit: 0.8 sec.
Memory limit: 256 MB.

Sample test

Input (medals.in)	Output (medals.out)
3 8 4	213