Problem D	Bar Codes
Time Limit	1 Second

A bar-code symbol consists of alternating dark and light bars, starting with a dark bar on the left. Each bar is a number of units wide. Figure 1 shows a bar-code symbol consisting of 4 bars that extend over 1+2+3+1=7 units.

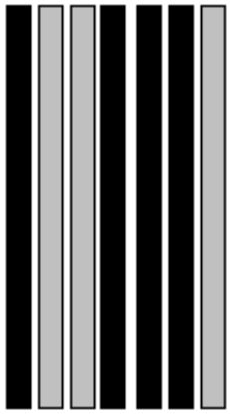

Figure 1: Bar-code over 7 units with 4 bars

In general, the bar code **BC(n,k,m)** is the set of all symbols with **k** bars that together extend over exactly **n** units, each bar being at most **m** units wide. For instance, the symbol in Figure 1 belongs to BC(7,4,3) but not to BC(7,4,2). Figure 2 shows all 16 symbols in BC(7,4,3). Each `1' represents a dark unit, each `0' a light unit.

```
0: 1000100 | 4: 1001110 | 8:  1100100 | 12: 1101110
1: 1000110 | 5: 1011000 | 9:  1100110 | 13: 1110010
2: 1001000 | 6: 1011100 | 10: 1101000 | 14: 1110100
3: 1001100 | 7: 1100010 | 11: 1101100 | 15: 1110110
```

Figure 2: All symbols of BC(7,4,3)

Input

Each input will contain three positive integers **n**, **k**, and **m** ($1 \le \mathbf{n}, \mathbf{k}, \mathbf{m} \le 50$).

Output

For each input print the total number of symbols in **BC(n,k,m)**. Output will fit in 64-bit signed integer.

Sample Input	Output for Sample Input
7 4 3 7 4 2	16 4

Collected (Slightly Modified by Md. Kamruzzaman)