# 1-sequence

**Winter Workshops, Day 1, Available memory 256 MB** *02.01.2020 - 08.01.2020*

We define a 1-sequence of length $N$ to be a sequence $s$ such that $\forall_{2 \leq i \leq N} |s_i - s_{i+1}| = 1$ and $s_1 = 0$. Calculate the number of 1-sequences of length $N$ with the sum of all terms being exactly $S$ and print the result modulo $10^9 + 7$.

## Constraints

- $2 \leq N \leq 256$
- $-2^{31} \leq S \leq 2^{31}$

## Input

| |
|---|
| $N$ $S$ |

## Output

Please, output the number of 1-sequences of length $N$ that have the sum $S$, modulo $10^9 + 7$.

## Examples

| Input | Output |
|---|---|
| 4 4 | 1 |

## Scoring

| Subtask | Constraints | Points |
|---|---|---|
| 1 | $N \leq 20$ | 10 |
| 2 | $-2^{15} \leq S \leq 2^{15}$ | 20 |
| 3 | no additional constraints | 70 |