

Spaceship

The Romanian Space Association (RSA) discovered a new asteroid, which they called BOI2003. RSA is eager to explore the asteroid BOI2003, so they built a spaceship to carry scientists to the asteroid. The spaceship they built has some peculiar features. When the spaceship leaves Earth for the first time it should carry exactly **S** scientists. When the spaceship arrives at the asteroid BOI2003, a single scientist lands and the spaceship returns to take over other **S** scientists.

The first scientist that landed on BOI2003 suspects the existence of a dangerous virus on the asteroid. Thus he suggests that, until the research is over, not a single scientist that traveled to BOI2003 should leave the spaceship when it arrives to Earth.

To be more specific, let's assume that the scientists are denoted by integers starting at **1**. The spaceship works in the following way:

- the first time it leaves Earth, the spaceship carries the scientists **1, 2, ..., S**; one of these scientists lands on the asteroid and the other **S-1** scientists return to Earth (but do not get off the ship);
- the second time the spaceship leaves Earth, the scientists **S+1, S+2, ..., 2S** gather the **S-1** scientists that came back, and the spaceship carries these **2S-1** scientists to BOI2003; one of them lands on the asteroid and the spaceship returns to Earth with **2S-2** scientists (again, they do not get off the ship);
- the third time, the scientists **2S+1, 2S+2, ..., 3S** together with the other **2S-2** scientists who already are on the spaceship, travel to BOI2003 and one of them lands on the asteroid;
- and so on.

After **N** rides, a research team consisting of **N** scientists has been carried over and is working on the asteroid BOI2003.

Task

Write a program that determines the number of possibilities to **form** the research team.

Input data

(file: **ship.in**)

The single line of the input file contains the integers **S** and **N**, separated by a single space.

Output data

(file: **ship.out**)

The single line of the output file contains an integer **K**, representing the number of possibilities to **form** the research team.

Constraints

- $1 \leq S \leq 10$
- $1 \leq N \leq 40$
- The spaceship has unlimited capacity.
- The order in which the members of the team arrive on the asteroid does not matter.

Example

ship.in	ship.out
2 3	14

Time limit: 0.4 seconds/test.