In a parliament there are parties, respectively with MPs. MPs from the same party always vote together.

For a bill to be approved, it must have the support of at least of them.

Party is considered "influential" if there exists a (possibly empty) subset of of other parties () such that, but , or in other words, the parties from parties cannot approve the bill by themselves, but they could if they get the support of party .

Find the number of "influential" parties.

**Input**

The first line of the file **parties.in** contains the numbers and . The second line contains numbers -

**Output**

Print the answer in the file **parties.out.**

**Constraints**

**Time limit: 1.4 sec.**

**Memory limit: 256 MB.**

**Sample test**

|  |  |
| --- | --- |
| **Input (parties.in)** | **Output (parties.out)** |
| 5 121  12 19 14 137 58 | 1 |