In a parliament there are $n$ parties, respectively with $x\_{1}, x\_{2}, … , x\_{n}$ MPs. MPs from the same party always vote together.

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

Party $i$ is considered "influential" if there exists a (possibly empty) subset $M=\{m\_{1}, m\_{2}, … , m\_{k}\}$ of $\left\{1, 2, …, n\right\}$ of other parties ($i⊄M$) such that$\sum\_{j=1}^{k}x\_{m\_{j}}<d$, but $x\_{i}+\sum\_{j=1}^{k}x\_{m\_{j}}\geq d$, or in other words, the parties from $M$ parties cannot approve the bill by themselves, but they could if they get the support of party $i$.

Find the number of "influential" parties.

**Input**

The first line of the file **parties.in** contains the numbers$ n$ and $d$. The second line contains$ n$ numbers - $x\_{1}, x\_{2}, … , x\_{n}$

**Output**

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

**Constraints**

$$1\leq n\leq 10^{5}$$

$$1\leq x\_{1}+ x\_{2}+ …+ x\_{n}\leq 10^{6}$$

$$\frac{x\_{1}+ x\_{2}+ …+ x\_{n}}{2}<d\leq x\_{1}+ x\_{2}+ …+ x\_{n}$$

**Time limit: 1.4 sec.**

 **Memory limit: 256 MB.**

**Sample test**

|  |  |
| --- | --- |
| **Input (parties.in)** | **Output (parties.out)** |
| 5 12112 19 14 137 58 | 1 |