CMPUT 275 - Tangible Computing **Winter 2020**
Morning Problem: Pair Hunt

Description

You are doing an internship at Walmart and your supervisor wants you to write a program to find if there are pairs of products whose total cost equals a given amount T. The idea is that they want to pair up distinct products to offer a "two for T" sale where for T dollars you buy two distinct products whose individual prices add up to T. Your supervisor wants you to do an initial feasibility analysis where you need to find a pair whose total cost equals the given T. The trouble is that Walmart has a gazillion products, so your code needs to run fast.

Input

Two lines, the first contains two space-separated integers n and T, where $2 \leq n \leq 250,000$ and $0 \leq T \leq 2 \cdot 10^9$. Here, n is the number of distinct items sold and T is the target price.

The next line contains n integers $p_1, p_2, \ldots, p_n$ indicating the prices of the items. These prices are distinct and each price satisfies $0 \leq p_i \leq 10^9$.

Output

Print a single line with a single integer indicating the number of pairs (i, j) with $1 \leq i < j \leq n$ such that $p_i + p_j = T$.

Sample Input 1

```
8 56
8 2 1 7 34 89 100 67
```

Sample Output 1

```
0
```

Explanation: No two prices sum to 56.

Sample Input 2

```
8 56
28 2 1 7 34 89 100 67
```

Sample Output 2

```
0
```

Explanation: While `28+28 = 56`, one cannot pair up a product with itself.

Sample Input 3

```
4 13
5 3 8 4
```

Sample Output 3

```
1
```

Explanation: `5+8 = 13`.

Sample Input 4

```
8 11
6 5 3 8 7 4 11 10
```

Sample Output 4

```
3
```

Explanation: All of `6+5`, `3+8` and `7+4` sum to `11`.