Fraudulent Activity Notifications

HackerLand National Bank has a simple policy for warning clients about possible fraudulent account activity. If the amount spent by a client on a particular day is *greater than or equal to* $2\times$ the client's median spending for the last d days, they send the client a notification about potential fraud. The bank doesn't send the client any notifications until they have at least d prior days of transaction data.

Given the value of d and a client's total daily expenditures for a period of n days, find and print the number of times the client will receive a notification over all n days.

Note: The median of a list of numbers can be found by arranging all the numbers from smallest to greatest. If there is an odd number of numbers, the middle one is picked. If there is an even number of numbers, median is then defined to be the average of the two middle values. (Wikipedia)

Input Format

The first line contains two space-separated integers denoting the respective values of n (the number of days there is transaction data for) and d (the number of prior days the bank uses to calculate median spending).
The second line contains n space-separated non-negative integers where each integer i denotes $expenditure_i$ (i.e., the client's total $expenditure$ for day i).

Constraints

- $1 \le n \le 2 \times 10^5$
- $1 \le d \le n$
- $0 \le expenditure_i \le 200$

Output Format

Print an integer denoting the total number of times the client receives a notification over a period of n days.

Sample Input 0

```
9 5
2 3 4 2 3 6 8 4 5
```

Sample Output 0

```
2
```

Explanation 0

We must determine the total number of $notifications$ the client receives over a period of $n = 9$ days. For the first five days, the customer receives no notifications because the bank has insufficient transaction data and $notifications = 0$.

On the sixth day, the bank has $d = 5$ days of prior transaction data, $\{2, 3, 4, 2, 3\}$, and $median = 3$ dollars. The client spends 6 dollars, which triggers a notification because $6 \ge 2 \times median$. Thus, $notifications = 1$.

On the seventh day, the bank has $d = 5$ days of prior transaction data, $\{3, 4, 2, 3, 6\}$, and $median = 3$ dollars. The client spends 8 dollars, which triggers a notification because $8 \ge 2 \times median$. Thus,
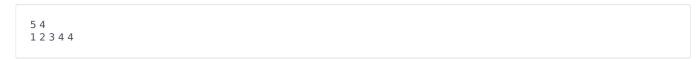
$notifications = 1 + 1 = 2$.

On the eighth day, the bank has $d = 5$ days of prior transaction data, $\{4, 2, 3, 6, 8\}$, and $median = 4$ dollars. The client spends 4 dollars, which does not trigger a notification because $4 < 2 \times median$.

On the ninth day, the bank has $d = 5$ days of prior transaction data, $\{2, 3, 6, 8, 4\}$, and a transaction median of 4 dollars. The client spends 5 dollars, which does not trigger a notification because $5 < 2 \times median$.

We then print the final value of $notifications$ (which is 2) as our answer.

Sample Input 1

```
5 4
1 2 3 4 4
```

Sample Output 1

```
0
```