Sequence

CIA

Available memory: 128 MB.

We say that an integer sequence $a_1, a_2, \ldots, a_n$ is *k-even* if the sum of any k consecutive terms of the sequnce is even.

For a given sequence we would like to find out how many of its terms need to be changed so that the sequence becomes k-even.

Input

The first line of input contains two integers n and k ($1 \leqslant k \leqslant n \leqslant 1\,000\,000$). The second line contains a sequence composed of n integers $a_1, a_2, \ldots, a_n$. For each of the a_i's it holds that $0 \leqslant a_i \leqslant 1\,000\,000\,000$.

Output

The only line of output should hold one integer: the minimum number of terms of the sequence that need to be changed so that it becomes k-even.

Example

For the input data:

```
8 3
1 2 3 4 5 6 7 8
```

the correct result is:

```
3
```

whereas for the input data:

```
8 3
2 4 2 4 2 4 2 4
```

the correct result is:

```
0
```


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