Cactus Matching

Description

Given a connected undirected simple graph with N vertices and M edges. Also, it is guaranteed that the graph is a cactus. A graph is a cactus if and only if every edge is on at most one simple cycle.

Now, please find the number of edges in the maximum matching in this graph.

Input Format

The first line contains two integers N, M indicating the number of vertices and edges in this graph.

Then, in the next M lines, each line contains two integers a_i, b_i, indicating that the i^{th} edge connects the vertex a_i and the vertex b_i.

- $2 \leq N \leq 10^5$
- $1 \leq M \leq 2 \times 10^5$
- $1 \leq a_i, b_i \leq N$
- The graph is a simple connected graph, and it's also a cactus.

Output Format

Output the number of edges in the maximum matching in the graph in one line.

Sample Input

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

Sample Output

```
2
```