Fridays for Future

This week, you want to organize a *Fridays for Future* protest in your home town. In order to reach the largest amount of people, you want to position groups of protesters with a huge poster at intersections in such a way that everyone traveling within the city passes at least one poster. (Traveling means starting at an intersection and driving to a different intersection).

You know that you have a large number of fellow protesters, but it is quite expensive to print large posters. Ideally, you would like to minimize the number of posters required. Unfortunately, there is not much time left until the next Friday and a friend that studies computers science told you that your problem will likely take a very long time to solve exactly. So you accept the next best thing and are happy if you print at most double the minimal number of posters required.

Input: Your home town is given as a graph where roads are represented by edges and intersections are represented by nodes. The first line of the input contains two numbers, the number of nodes n and the number of edges m. This is followed by m lines containing two integers $a, b \in \{0, \ldots, n-1\}$. Each such pair describes an edge in the graph.

Output: The number of posters required so that it is impossible to travel along any path (of at least one edge) in the graph without seeing a poster. This number does not have to be the minimal number required, but it has to deviate at most by a factor of 2 from this number.

Sample Input:

```
5 5
0 2
1 2
1 3
2 3
3 4
```

Sample Output:

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2
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2 *is the optimal solution, but values up to 4 would be fine as well.*