

# Connected country

After a strong earthquake many roads of the ancient country GRAPH were destroyed. The country is divided into disconnected areas so that from one area city it is impossible to reach another area city. Pharaoh wants to restore the road infrastructure and connect all the cities. He asks the great [Thoth](#) to find the minimum number of roads needed for this.

## Input

The first line of input will contain two space separated integer numbers:  $0 < N \leq 800000$ , number of cities and  $0 < M < 4000000$ , number of roads. Follow  $M$  lines. Each line represents cities (numbering is zero based) connected by road. All roads are bidirectional.

## Output

One integer number. Answer of the Thoth

## Example

**Input:**

```
6 6
0 1
0 2
1 2
3 4
3 5
4 5
```

**Output:**

```
1
```

## Example explanation

One road from the city number 1 to the city number 4 makes GRAPH connected.

