



TIME: 03:49:15 / 1 DAY

QUES: 2/3



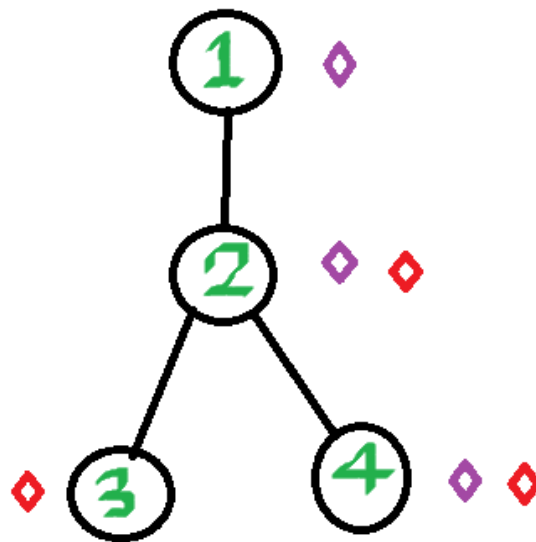
Submit Test

## Problem Statement

**Hiding Christmas Gifts** (100 Marks)

There are **N** houses in a city connected by **exactly N - 1** roads. There is exactly 1 shortest path from any house to any other house. The houses are numbered from **1 to N**.

Since Christmas is about to come so Santa has decided to hide gifts in these houses. Santa will come to the city for **M** consecutive days. Each day he will come to a house **a** first and will go till house **b** hiding a gift in each house that comes in the path.



(Image for sample input 1)

Can you tell the maximum number of gifts any house has after M days.

**Input Format**

First line of input contains 2 integers N - the number of houses in the city and M - the number of days for which Santa comes to the city.

Next N - 1 lines contains two integers u and v meaning there is a road between house u and house v,  $u \neq v$ .

Next M lines contains two integers  $a_i$  and  $b_i$  representing the starting and ending house on  $i^{\text{th}}$  visit of Santa.

**Constraints**

1 ≤ N ≤ 100,000  
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 1 ≤ M ≤ 100,000  
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 1 ≤ u, v ≤ N  
 1 ≤ a, b ≤ N

 **Submit Test**

### Output Format

A single integer representing the maximum number of gifts in any house.

### Sample TestCase 1

#### Input

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

#### Output

```
2
```

### Explanation

See the image above. The purple diamonds represent the gifts hidden during Santa's first visit and the red diamonds represent the gifts hidden during Santa's second visit. We can see that houses 2 and 4 has maximum number of gifts hidden. Both are having 2 gifts hidden, hence the answer is 2.

### Sample TestCase 2

#### Input

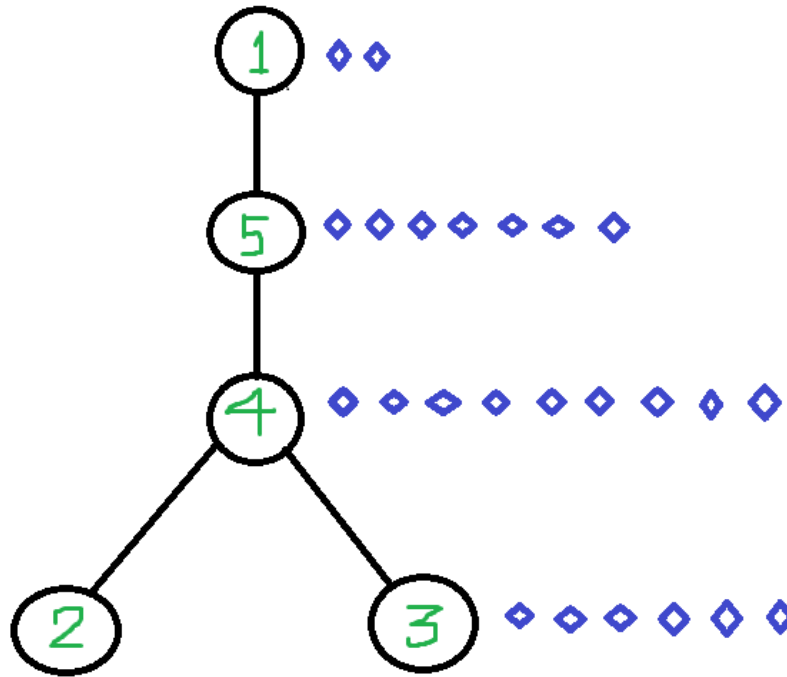
```
5 10
3 4
1 5
4 2
5 4
5 4
5 4
3 5
4 3
4 3
1 3
3 5
5 4
1 5
3 4
```

#### Output



## Explanation

See the following image. The house number 4 has maximum number of hidden gifts i.e. 9. (Ignore color of diamonds in this case)



**Time Limit(X):** 1.00 sec(s) for each input.

**Memory Limit:** 512 MB

**Source Limit:** 100 KB

**Allowed Languages:** C, C++, C++11, C++14, Java, Java 8

Judge Environment (<https://www.techgig.com/platform-faq>)

C ( gcc 4.9.2 )

1 ~~/\* Read input from STDIN. Print your output to STDOUT\*/~~  
2 ~~#include<stdio.h>~~  
3 ~~int main(int argc, char \*a[])~~  
4 ~~{~~  
5  ~~//Write code here~~  
6 ~~}~~  
7

**Submit Test**

NORMAL

Line: 7 Col: 1

**Submit Code****Compile & Run**