| Info | Summary | Submissions | Standings | Submit clar | Clars | Settings |

Logout [ads23_22B030458]

23:28:24 / **RUNNING**

| A | B | C | D | E | F | G | H | I | J |

## Submit a solution for E-52477. Width

**Time limit:** 1 s

**Real time limit:** 5 s

**Memory limit:** 256M

### Problem E: 52477. Width

Given a binary tree, write a program to get the width of the given tree.

The level of a node is the number of vertices on the path from this node to the root. The width of a level $h$ is the number of vertices with level $h$. Th width of a tree is the maximal width over the levels.

Vertex number 1 always will be root.

### Input format

Given integer $n - (1 \le |n| \le 10^3)$, number of vertexes. The next $n - 1$ lines has $3$ numbers $x, y, z$ - description of binary tree, meaning that vertex y s of vertex x, if z = 0, it is left son, if z = 1 it is right son.

### Output format

Print one integer maximum width.

### Examples

**Input**

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

**Output**

```
3
```

**Input**

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

**Output**

```
2
```

### Notes

sample 1:

Explanation: The maximum width existing in the third level with the length 3 (5,6,4).
sample 2:
Explanation: The maximum width existing in the third level with the length 2 (3,4).

### Submit a solution

Language:  [ g++ - GNU C++ 11.4.0  ▾ ]

File　　　　　[ Choose File ] No file chosen

Send!　　　　[ Send! ]

## Previous submissions of this problem

| Run ID | Time | Size | Problem | Language | Result | Failed test | View source | View report |
|--------|------|------|---------|----------|--------|-------------|-------------|-------------|
| 1882 | 1006:55:56 | 2140 | E | g++ | OK | N/A | View | View |

| A | B | C | D | E | F | G | H | I | J |