Problem K. Inspection

Input file:	*standard input*
Output file:	*standard output*
Time limit:	1 second
Memory limit:	256 mebibytes

Polycarp visited ty Bytegorsk, one of cities of Berland, to inspect all the bus routes in the city.

The road network in Bytegorsk consists of N bus stops and several bidirectional roads, connecting them in such a way that between any two bus stops exists only one path (indirect or through other bus stops). Time for bus to pass distance between any two consecutive (i.e. directly joined by the road) cities is 1 minute.

For each two bus stops in Bytegorsk exists express-route of the bus, which connects those bus stops and is ignoring other stops on the way. Polycarp wants to inspect each of those routes atleast once (does not matter, in which direction).

Calculate the minimum time Polylcarp need to inspect all express-routes.

Input

First line of the input contains one integer N — number of bus stops ($1 \le N \le 2 \times 10^5$).

Each of next lines contains description of the one road — two integers a and b ($1 \le a, b \le N; a \ne b$) – number of stops it connect. It is guaranteed that each pair is listed no more than once.

Output

Print one integer — minumum time Polycarp need to inspect all express-routes.

Examples

standard input	standard output
5 1 2 1 3 3 4 3 5	18
2 2 1	1