DMOPC '14 Contest 5 P2 - Longest Tunnel

Time limit: 2.0s   **Memory limit:** 64M

Simon likes drilling tunnels parallel to the ground. Simon has drilled N horizontal line tunnels. Each tunnel t starts from X_{t_1} and ends at X_{t_2}. What is the length of the longest tunnel that Simon has dug?

Input Specification

The first line of input will contain the single integer N ($1 \leq N \leq 500$).
For each of the next N lines, line t will contain two space-separated integer values X_{t_1} and X_{t_2} ($0 \leq X_{t_1} < X_{t_2} \leq 10^9$).

Output Specification

On one line, the length of the longest tunnel.

Sample Input

```
3
1 8
9 150
0 81
```

Sample Output

```
141
```