

C. Tic-tac-toe

time limit per test: 1 second

memory limit per test: 64 megabytes

input: standard input

output: standard output

Certainly, everyone is familiar with tic-tac-toe game. The rules are very simple indeed. Two players take turns marking the cells in a 3×3 grid (one player always draws crosses, the other — noughts). The player who succeeds first in placing three of his marks in a horizontal, vertical or diagonal line wins, and the game is finished. The player who draws crosses goes first. If the grid is filled, but neither Xs, nor Os form the required line, a draw is announced.

You are given a 3×3 grid, each grid cell is empty, or occupied by a cross or a nought. You have to find the player (first or second), whose turn is next, or print one of the verdicts below:

- `illegal` — if the given board layout can't appear during a valid game;
- `the first player won` — if in the given board layout the first player has just won;
- `the second player won` — if in the given board layout the second player has just won;
- `draw` — if the given board layout has just let to a draw.

Input

The input consists of three lines, each of the lines contains characters ".", "X" or "O" (a period, a capital letter X, or a digit zero).

Output

Print one of the six verdicts: `first`, `second`, `illegal`, `the first player won`, `the second player won` or `draw`.

Examples

input
XOX .O. .X.
output
second