Problem 4—Poker Hands

Professor Plum likes to play poker, so he is trying to teach a Computer Science colleague to play.

In poker, the cards are valued in the ascending order:
2, 3, 4, 5, 6, 7, 8, 9, 10, Jack, Queen, King, Ace.

A poker hand consists of five cards and are ranked, from lowest to highest, in the following way:

- **High Card**: Highest value card.
- **One Pair**: Two cards of the same value.
- **Two Pairs**: Two different pairs.
- **Three of a Kind**: Three cards of the same value.
- **Straight**: All cards are consecutive values.
- **Flush**: All cards of the same suit.
- **Full House**: Three of a kind and a pair.
- **Four of a Kind**: Four cards of the same value.
- **Straight Flush**: All cards are consecutive values of the same suit.
- **Royal Flush**: Ten, Jack, Queen, King, Ace, in same suit.

If two players have the same ranked hands, then the rank made up of the highest value wins; for example, a pair of eights beats a pair of fives (see example 1 below). But if two ranks tie, for example, both players have a pair of queens, then highest cards in each hand are compared (see example 4 below); if the highest cards tie then the next highest cards are compared, and so on.

Consider the following five hands dealt to two players (`'T'` is 10, `'J'` is Jack, `'Q'` is Queen, `'K'` is King, `'A'` is Ace):

Hand	Player 1	Player 2	Winner
1	5H 5C 6S 7S KD Pair of Fives	2C 3S 8S 8D TD Pair of Eights	Player 2
2	5D 8C 9S JS AC Highest card Ace	2C 5C 7D 8S QH Highest card Queen	Player 1
3	2D 9C AS AH AC Three Aces	3D 6D 7D TD QD Flush with Diamonds	Player 2
4	4D 6S 9H QH QC Pair of Queens Highest card Nine	3D 6D 7H QD QS Pair of Queens Highest card Seven	Player 1
5	2H 2D 4C 4D 4S Full House With Three Fours	3C 3D 3S 9S 9D Full House With Three Threes	Player 1

Professor Plum has a program for generating a file containing a specified number of random poker hands for two poker players. He plans on emailing this file to his colleague in training daily. He wants you to write a program to take this file and report the number of wins for Player 1 and Player 2.

INPUT SPECIFICATION – File name “prob4.in”
The first line of the input file contains an integer count of the number of lines in the rest of the file. Each of the remaining lines describe 10 cards with the first 5 being Player 1’s hand and second 5 being Player 2’s hand. Each card is represented by two characters as in the above example. Each of the 10 cards on a line is separated by a single blank space.

OUTPUT SPECIFICATION.
The output file should contain two lines of output. The first line should specify the number of hands won by player 1, and be formatted exactly as: “Player 1 won # hands.” with the ‘#’ replaced by the correct integer. The second line should specify the number of hands won by player 2, and be formatted exactly as: “Player 2 won # hands.” with the ‘#’ replaced by the correct integer.

SAMPLE INPUT.

```
6<EOLN>
8C TS KC 9H 4S 7D 2S 5D 3S AC<EOLN>
5C AD 5D AC 9C 7C 5H 8D TD KS<EOLN>
3H 7H 6S KC JS QH TD JC 2D 8S<EOLN>
TH 8H 5C QS TC 9H 4D JC KS JS<EOLN>
7C 5H KC QH JD AS KH 4C AD 4S<EOLN>
5H KS 9C 7D 9H 8D 3S 5D 5C AH<EOLN>
<EOF>
```

SAMPLE·OUTPUT.

```
Player 1 won 3 hands.<EOLN>
Player 2 won 3 hands.<EOLN>
<EOF>
```