Anna and Bernat play now to poker with dice (in a simplified version). In each turn, first Anna throws five poker dice, and then Bernat throws them. Each die has 6 sides, with values (more to less): ace, king, queen, jack, ten and nine. Each time wins who gets the highest move. In the event of a tie, Anna wins.

These are the possible move, sorted from more to less value:

- **Five-of-a-kind**: 5 dice equal.
- **Four-of-a-kind**: 4 dice equal.
- **Full house**: 3 dice equal and two dice equal.
- **Three-of-a-kind**: 3 dice equal.
- **Two pair**: two dice equal and two dice equal.
- **One pair**: two dice equal.
- **Nothing**: All the dice different.

If the two players have the same move, wins who has obtained it with the highest dice. Thus, for instance, a three-of-a-kind of aces wins a three of a kind of kings, and a two pair of kings and nines wins a two pair of queens and jacks.

If still there is a tie after using the dice of the most valuable combination, the second combination is used to break the tie, and so forth. For instance, a three-of-a-kind of jacks with a king wins to a three of a kind of jacks with a queen, a two pair of kings and queens wins to a two pair of kings and tens, a three-of-a-kind of jacks with a king and a ten wins to a three-of-a-kind of jacks with a king and a nine, and nothing with an ace and a king wins to a nothing with an ace and a queen.

Write a program that reads the moves of each game, and decides who wins each one, and computes how many games has won each one.

**Input**

Input consists of several lines, each one with the throws of dice of a turn (two strings with five characters each one between 'A', 'K', 'Q', 'J', 'T' and 'N', corresponding respectively to an ace, king, queen, jack, ten and nine).

**Output**

In each turn, print "Anna" or "Bernat" depending on who wins. At the end, print the total number of won games for each one, following the format of the instance.

**Sample input**

```
AAAAA KKKKK
KKNKK QQQQA
```

```
JJJTT KKAAQ
AQJTN AKJTN
JJTTN JJTTN
AKQJN AKQJT
```
Sample output

Anna
Anna
Anna

Bernat
Anna
Bernat
Anna won: 4
Bernat won: 2

Problem information

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