

Counting Cards

In the game of Blackjack, players receive cards from the shoe, which is made up of several decks of playing cards. Each deck contains exactly 52 cards, because there are four of each type of card: King, Queen, Jack, Ace, 2, 3, 4, 5, 6, 7, 8, 9, and 10. Every turn, the players have the option of drawing an additional card, or staying and drawing no cards. The goal of Blackjack is to have a total card value as close to 21 as possible, without going over.

Card	Points	Input
2	+1	2
3	+1	3
4	+1	4
5	+1	5
6	+1	6
7	0	7
8	0	8
9	0	9
10	-1	0
Jack	-1	J
Queen	-1	Q
King	-1	K
Ace	-1	A

Counting cards helps players determine when they should bet more money. A simple card counting strategy is to assign point values to each card. When the game begins, the overall score starts at zero, and it changes whenever a card is drawn. A positive score means it is safer to make a large bet, and a negative score means it is safer to make a small bet.

Based on which cards have already been played, your task is to determine what type of bet the player should make next.

Input

The input begins with a single integer, describing the number of cases. Each case begins with a line containing exactly two integers describing the number of decks, j , in the shoe and the number of cards, k , played in the game thus far.

The next line contains k characters, describing the cards played. The table above contains the expected character values for each card.

Output

For each case, display the case number followed by the type of bet the player should make on their next turn.

A 'high' output means the player should bet a large sum of money, and a 'low' output means the player should bet less money. Finally, an 'inconclusive' output means that there is not enough information to determine what type of bet the player should make next.

Sample Input

```
3
4 10
2 0 3 J 4 Q 5 K 6 A
3 14
2 4 5 6 A 2 4 0 K 7 Q 4 8 9
7 3
0 J Q
```

Sample Output

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Case 1: inconclusive
Case 2: high
Case 3: low
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