

6547 Split Decision

Alan has wandered into a casino featuring a new card game, *Split Decision*. On each hand of this game, each player antes (to “ante” means to pay an amount with the possibility of winning it back) one chip, then the dealer receives two cards face up and each player receives a single card, face up. Each card has a value somewhere in the range from 2 to 11, inclusive. The values of the dealer’s cards are added up, and a player must beat that total to win. (The dealer wins on ties.)



On his turn, Alan must decide to do one of the following

- “fold” his hand (losing the chip he has already paid)
- “stay”, in which case he must ante up another chip to receive a second card from the deck. If he wins, Alan recovers his two-chip ante and wins a further two chips.
- “split”, in which case he must ante up another two chips and receives one card to add to his original hand and another two cards that are added together as a separately scored hand. These cards are dealt in that order — Alan does not get to decide which card goes into which hand.

On a split, Alan can win with both pairs, in which case he recovers his 3-chip ante and wins an additional 3 chips. He might lose with both pairs, in which case he loses the three chips he has anted. Finally, he might win with one pair and lose with the other, in which case his three chips are returned to him and he neither wins nor loses on that round.

Alan is very good at counting cards. As the game progresses, he can accurately keep track of what cards have already been played and, therefore, what cards remain in the deck for future play. Of course, he does not know in what order the remaining cards will appear.

Given a list of card values remaining in the deck, the values of the dealer’s two cards, and the value of Alan’s current card, determine whether Alan should fold, stay, or split in order to maximize his probable earnings (or minimize his probable loss) on this hand. If two of the options are tied for optimum win/loss, choose the option that risks the fewest total chips.

Input

The input may contain multiple test cases.

Each test case consists of two lines.

The first line contains the value of Alan’s card and the values of the two dealer cards. Each card value is presented as an integer in the range 2 . . . 11, inclusive. A value of zero for the first of these integers signals end of input and does not constitute a valid test case.

The second line contains 10 integers in the range 0 . . . 4, indicating the number of cards remaining in the deck having values 2 . . . 11, respectively. The three cards from the first line are not included in these counts of remaining cards. The sum of the integers on this line will not exceed 49 nor fall below 3.

Output

For each dataset, print a single line containing only the word ‘fold’, ‘stay’, or ‘split’, left-justified and with no blank spaces, indicating the preferred action as outlined above.

Sample Input

```
5 2 10
1 2 3 1 2 1 1 0 0 0
5 2 10
0 0 1 0 2 1 1 4 4 4
11 2 10
1 2 3 1 2 1 1 0 0 0
0 0 0
```

Sample Output

```
fold
split
stay
```