

Maths is Magic

Nikita is fascinated by card tricks. She knows that many of the tricks are nothing but mathematical calculations, so she decides to create her own trick. She calls her three friends **Medha, Muskan and Anita** to show her trick.

The trick goes like this. Nikita has a **deck of cards (52 cards), 4 plates(plate1,plate2,plate3,plate4)**. She asks her friend to shuffle them.

Now she wants her friends to assume some things:

1. Jack card has value=1
2. Queen has value=2
3. King has value=3
4. Ace has value=4
5. Rest of the cards have the value that are on them.
6. Suits don't matter

Now from the shuffled deck, Nikita takes out one by one 26 cards and puts them on plate1 (these 26 cards are shown to everyone) upside down and hands over the remaining deck to medha.

She asks Medha to take any card say **card A** from the deck and put it on the plate2 and make its value to 10 by adding the other cards to the plate. **For instance**, Suppose the card taken by Medha is 4, now its value can only be made to 10 by adding any 6 cards (irrespective of the value of the cards) from the deck. **Medha passes the remaining cards to Muskan.**

Now she asks Muskan to take any card from the remaining deck of cards say **card B** and put it on the plate 3 and make its value to 10 like medha did. **For instance**, Suppose Muskan choose Jack (value=1), now its value can only be made to 10 by adding any 9 cards from the deck. **Muskan passes remaining cards to Anita.**

Now she asks Anita to take any card from the remaining deck of cards say **card C** and put it on the plate 4 and make its value to 10 like medha did, If Anita doesn't have sufficient cards she can borrow from the plate1 (**from top of the deck**). **For instance**, Suppose Anita choose 7, now its value can only be made to 10 by adding any 3 cards from the deck. **Anita passes remaining cards to Nikita.**

Now she put the remaining cards on the deck that is already on plate1 (upside down), and asks her friend to tell her the sum of card A + card B + card C. **Say this sum is index.**

From the deck of cards on plate1, She predicts the value of a card at the index (index=card A + card B + card C). Her friends take out the cards from plate1 and find the same card at that index. Voila they are surprised.

Input

First line will contain 'T' no. of testcases.

Each line will have values of **26 cards**, followed by the values of **Card A, Card B and Card C**.

(Its guaranteed that the cards A,B and C are not Q,K,A)

Output

Each testcase must predict the value of the card in plate1 at the index. Where index=values of card A+ card B + card C.

(Remember **plate1 has 26 cards plus remaining cards given by Anita**).

Example

Input:

1

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

7 2 4

Output:

7

(Explanation: plate1 initially has 26 cards. Now from remaining 26 cards 7 (Card A) was chosen by medha and to make its value 10, three more cards were added to plate2. From remaining 23 cards, medha added 8 more cards to make its value 10. Now from remaining 13 cards, Anita choose 4 Card C) and added 6 more cards. Remaining 6 cards were put on 26 cards already in plate1. Index=13(7+2+4), So Nikita predicted card at index no=13 from the 32 cards.)