

2416 100's Game

Play to win the 100's game. This is a children's math game.

Input

A sequence of 100's game deals. Each card is marked with a single digit. The first line lists six cards. Each subsequent deal is four cards until the end of the game, marked by a blank line or the end-of-file.

A typical input file would look like the Sample Input below.

GAME

After each deal, you have six cards in your hands. You play by choosing two pairs of cards so they represent numbers between 00 and 99. Your goal is to pick them so that the sum of the two numbers is as close as possible to 100. Your score (a penalty) is how close to 100 your sum is.

Even though the sequence of cards is represented in the input file, in actual play you are not aware of which cards will come next. Therefore, your algorithm must be greedy: choosing one of the best plays of the given hand irrespective of how that may benefit or cost the value of a later hand.

After you play, the cards you play are discarded, but the two remaining are left for the next round of cards.

Your score is the sum of penalties for each hand.

Output

For each round, you should generate a line of output corresponding to (one of the) closest picks available from your hand. The format for this is

number+number=sum

where there are no intervening spaces. Leading zeros are printed for each number on the left.

After a game, the total penalty should be printed, in the form:

score: *SCORE*

For the sample input file, the sample output below would be a correct output sequence.

Note that there are potentially many correct optimal plays corresponding to a given game.

Sample Input

```
675356
2912
7093
6062
6187
```

```
202375
9228
9736
1293
1947
8450
3610
```

6320

6155

4765

6937

Sample Output

65+35=100

79+21=100

07+93=100

66+26=92

20+81=101

score: 9

23+75=98

02+98=100

22+79=101

31+69=100

21+79=100

43+58=101

40+60=100

33+62=95

51+50=101

46+56=102

61+39=100

score: 12