We are the champions of the Eu-
roBasket 2015! The team of Gasol,
Navarro, Reyes, Rudy, Mirotic,
Llull, etc. is probably one of the
best basketball teams in Europe
of all history: winners of the Eu-
roBasket in 2015, 2011, 2009, silver
medal in 2008 and 2012 Olympic
Games, winners of the Basketball
World Cup in 2006... But, what is
your ideal quintet?

All players of the Spanish team
have been scored from 0 to 100 with
respect to a series of features, such
as rebounds, assists, average score, free shots, blocks, etc. In this problem, we want to find the best
and most balanced team of five players in all features.

We have a set of 10 basketball players (numbered from 4 to 13), and a set of 12 different features.
Each player is scored in each feature, with an integer value in the range 0-100.

The objective of this problem is to select the best and most balanced team of 5 players. In particular,
we define the *score of a team* as the geometric mean of the maximum for each feature. In other words,
for each feature we consider the maximum of the 5 selected players, and then we take the geometric
mean of the 12 maximums.

The ideal team is the set of 5 players with the highest team score. If more than one optimal solution
exists, you have to select the one that uses the players with lowest numbers.

Input

The input contains several test cases. The first line contains a number indicating the total number of
test cases.

Each test case consists of 10 lines, one line for each player, from player 4 to player 13. Each line
contains 12 integer numbers from 0 to 100, separated by blank spaces, indicating the scores of the
corresponding player in each feature. Test cases are separated by empty lines.

Output

For each input case, you have to output the ideal team of 5 players. You have to print the numbers
of the players in ascending order, and separated by blank spaces. Remember that the players are
numbered from 4 to 13; and if there are many optimal solutions, you have to output the one that uses
the lower player numbers first.

Sample Input

2

39 62 35 98 54 81 8 27 98 87 94 76
12 66 69 36 62 3 83 49 24 86 100 100
34 31 38 61 58 45 21 65 62 2 82 9
75 78 35 79 15 44 97 10 51 73 12 16
51 99 96 6 56 76 76 51 15 30 69 49
31 50 26 54 11 59 32 13 41 86 52 33
70 20 61 63 84 77 89 30 20 23 86 53
72 74 30 96 74 93 82 41 61 62 36 73
26 56 48 36 68 93 15 22 56 75 1 92
27 30 97 12 13 2 90 87 22 47 36 2

71 59 23 94 40 4 88 93 50 34 94 56
32 76 84 33 71 71 11 57 26 89 15 46
76 71 56 33 15 8 63 10 24 80 85 64
31 39 1 55 26 77 80 56 12 94 46 74
64 24 5 46 48 81 24 42 80 15 14 42
81 40 80 47 77 69 29 17 83 94 79 1
93 22 79 77 58 100 56 67 24 9 5 43
17 52 65 11 47 12 47 79 3 27 99 9
42 39 2 3 89 15 37 65 14 20 7 37
43 13 8 32 96 32 75 30 8 14 71 4

Sample Output

4 5 8 11 13
4 5 7 9 10