Problem C. Welcome To 2025ICPC!

TimeLimit:	0.5 seconds
MemoryLimit:	256 megabytes

In a parallel world. The International Collegiate Programming Contest (ICPC) is the biggest programming contest for university students who study computer science. It gathers top teams from universities and international schools, who compete for a chance to enter the ICPC Asia Pacific Championship and the ICPC World Finals. The ICPC Asia Pacific Championship is a contest where top teams from different Asian countries compete, such as Seoul National University and The University of Tokyo. The ICPC World Finals is the final stage of the contest, where top teams from all over the world, such as Peking University and MIT.

In the 2025 ICPC Taichung Regional, about 100 local teams and 10 international teams are expected to participate. This year, students from NTOU (National Taiwan Ocean University) performed very well in preliminary contests such as NCPC (National Collegiate Programming Contest) and TOPC (Taiwan Online Programming Contest). Finally, six teams from their school got promoted to regional contest.

How are these six teams decided? The ICPC Regional teams are given based on results in several preliminary contests:

1. First, select the top 30 teams in TOPC.
2. Then, the top 40 teams from NCPC are chosen.
3. After that, up to 10 teams can be recommended from CPE (Collegiate Programming Examination) based on their scores.
4. Finally, the remaining teams are filled according to TOPC ranking, prioritizing candidates from the top.

All contests follow the official ICPC scoring rules. Teams are ranked by the number of solved problems and then by total penalty time. More solved problems means a better rank. If two teams solved the same number of problems, the one with the smaller total penalty time ranks higher. The penalty time of a problem is the time from the contest start until it is accepted, plus 20 minutes for each wrong submission (compile errors are not counted). If there is still a tie, the team that solved its last problem earlier ranks higher.

In the 2025 ICPC Taichung Regional, medals are given in three levels: gold, silver, and bronze, awarded to 30, 20, and 10 teams respectively. The 1st place team will directly advance to the ICPC World Finals. After that, around 10 more teams will be chosen to enter the ICPC Asia Pacific Championship, following the Asia Pacific Championship rules for 2025–2026. In the recent years, one team from NTOU successfully qualified for the Asia Pacific Championship.

How do teams advance from the ICPC Asia Pacific Championship to the ICPC World Finals? Let S be the total number of World Finals teams given to the Asia Pacific Championship region, and T be the number of first-place region winners (after removing duplicates from the same university). Then, the number of Asia Pacific Championship teams that can advance to the World Finals is $S - T$.

As a newbie competitive programmer, you only care about one thing — whether you can get a medal in the ICPC Taichung Regional this year. Given a list of team names and their final rankings, your task is to find how many teams received gold, silver, and bronze medals based on the 2025 ICPC Taichung Regional rules.

Input

The first line contains an integer n — the number of teams participating in the 2025 ICPC Taichung Regional.

Each of the following n lines contains a string s and an integer p, denoting the team's name and their final rank in the contest. All team names s and all final ranks p are distinct.

- $1 \leq n \leq 110$
- $1 \leq |s| \leq 50$, each team name s contains only letters, digit, and underlines.
- $1 \leq p \leq 110$

Output

Print three integers representing the number of teams that receive gold, silver, and bronze medals, respectively.

Examples

standard input	standard output
3 Rurudo_daisuki 9 The_Outliers 51 XwX 59	1 0 2
7 Mashu 53 Enter 55 Miaotomata 57 Suzukaze_daisuki 61 Rigby 70 XwX 80 haruhikagerogerokonokositantan 98	0 0 3
6 Meowtomatwo 1 XwX 2 RTX9090 3 Nondeterministic_Finite_Haruhikage 4 NTOU_Microhard 5 supercalifragilisticexpialidocious 6	6 0 0