Alice and Bob are addicted to My World Cup recently. They always play together. Alice wants to figure out the probability of her winning. She turns to you for help.

First of all, you must be familiar with the special dice and cards for My World Cup.

The dice is six-sided. Two faces have a ball on them, while the other four faces do not. Dice is an important accessory for My World Cup.

There are many cards in My World Cup. Each card belongs to one of four types: foul, offense, defense, and attack. As well, each card has speed and power.

When two cards from different sides meet, both of them may take some effect, which depends on both cards’ type:

1. If your card is an offense:
   - If the other card is a foul, your card has no effect.
   - Otherwise, you can throw a dice for four times. If you throw the dice for the fourth time, no effect.
   - If the other card is an attack, both of you will have a penalty kick.

2. If your card is a foul:
   - If the other card is an attack, your card has no effect.
   - If the other card is a foul, your card's power will be reduced by the defense card’s power.

3. If your card is a defense:
   - If the other card is a defense, both sides have no effect.
   - If the other card is an attack, your team will have a shoot of your card's power minus the attack card's power.

4. If your card is an attack:
   - If the other card is a defense, the victory are theirs. However, if both teams score an equal number of goals, an extra time will be added — each player should put his last card on the field, and the game continues for one more turn.
   - If the teams still have scored an equal number of goals at the end of these five rounds of penalty kicks, sudden death rounds of one penalty kick each are used, until one side scores more goals than the other could possibly reach with all of its remaining penalty kicks.
   - If the rounds are tied in sudden death, the shoot-out ends immediately.

The owner of the main card can choose one card as the subordinate card among the cards in the opponent’s field (including the card selected from step(1) by the opponent).

The main card and the subordinate card meet each other and both take their effects.

If there is no card on the field at this time, a team scores one goal. If a team scores more goals than the other, the victory are theirs.

The game's process in detail is going to be explained below.

1. Preparation:
   1. (1) Player is decided to be home and the other is away.
   2. (2) Each player has five cards, four are on the field, one is off the field.

2. During each turn:
   1. (1) Each player selects one card with the largest speed value on his own field. If two or more cards meet the conditions, he can choose anyone among them.
   2. (2) Choose the one with larger speed value among two cards selected from step (1) to be the main card. If two cards have the same speed, the one comes from the home team will be chosen.
   3. (3) The owner of the main card can choose one card as the subordinate card among the cards in the opponent’s field (including the card selected from step(1) by the opponent).
   4. (4) The main card and the subordinate card meet each other and both take their effects.
   5. (5) Both the main card and the subordinate card are removed from the field.

3. After four turns, there is no card on the field. At this time, if a team scores more goals than the other, the victory are theirs. However, if both teams score an equal number of goals, an extra time will be added — each player should put his last card on the field, and the game continues for one more turn.

4. If the game ends as a draw even after the extra time, well, an exciting penalty shoot-out is used to determine the winner.

   (1) Teams take turns to take penalty kicks, until such has taken five kicks. However, if one side has scored more goals than the other side could possibly reach with all of its remaining penalty kicks, the shoot-out ends immediately.

   (2) The owner of the main card and the subordinate card meet each other and both take their effects.

   (3) The team scores more goals at last is the winner.

Now, give you the full information of Alice’s and Bob’s cards, can you calculate the probability of Alice’s winning while both of them are taking optimal strategy to win the game. Note that Alice is always home.

Input
The input begins with a line containing an integer $T$ ($1 \leq T \leq 30$), the number of test cases. Each test case contains 10 lines. Each line contains three integers $t$, $s$, and $p$ ($0 \leq t \leq 3$, $1 \leq s \leq 10$, $0 \leq p \leq 9$) indicating a single card’s information. $t$ is the type (`0' for foul, `1' for offense, `2' for defense, and `3' for attack), $s$ is the speed, and $p$ is the power of the card. The first five cards belong to Alice (first four are on the field and the fifth is off the field), and the last five cards belong to Bob (also first four are on the field and the fifth is off the field initially).

Output
For each test case, you just need to print the probability of Alice’s winning as a percentage in one line (rounded to the nearest integer).

Sample Input
2
1 6 2
1 6 1
6 3 1
6 3 1
6 3 1
6 3 1
6 3 1
6 3 1
6 3 1
6 3 1
Sample Output
4
0