

Rock Paper Scissors

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 256 megabytes

BaoBao and DreamGrid are playing a card game. Each player has n cards in the beginning and there are three types of cards: rock, paper, and scissors.

The game consists of n rounds. In each round, BaoBao will first play one of his remaining cards (this card is shown to both players). After that, DreamGrid can choose one of his remaining cards and play it (also shown to both players). The score of this round is calculated by referring to the following table:

DreamGrid ↓ BaoBao →	Rock	Paper	Scissors
Rock	0	-1	1
Paper	1	0	-1
Scissors	-1	1	0

After the round, the two played cards are removed from the game. The score of the whole game is the sum of the score of each round.

BaoBao aims at minimizing the score of the whole game, while DreamGrid aims at maximizing it. Both players know the number of cards of each type his opponent and himself holds in the beginning. What's the final score of the game given that both of them take the best strategy?

Input

There are multiple test cases. The first line of the input contains an integer T ($1 \leq T \leq 10^3$) indicating the number of test cases. For each test case:

The first line contains three integers b_r , b_p and b_s ($0 \leq b_r, b_p, b_s \leq 10^9$), indicating the number of rock, paper and scissors cards BaoBao has.

The second line contains three integers d_r , d_p and d_s ($0 \leq d_r, d_p, d_s \leq 10^9$), indicating the number of rock, paper and scissors cards DreamGrid has.

It's guaranteed that $b_r + b_p + b_s = d_r + d_p + d_s$.

Output

For each test case output one line containing one integer indicating the final score of game.

Example

standard input	standard output
4	-2
4 4 2	2
10 0 0	5
0 10 0	30
2 4 4	
1 2 3	
3 2 1	
10 10 10	
10 10 10	