E. ProbNim

You are playing a probabilistic variant of 3-pile nim with your friend. Each pile has some number of stones in it. On a turn you must pick a pile with a positive number of stones. You then roll a fair 6-sided die to determine the number of stones to remove from that pile. If your roll exceeds the number of stones, you just remove all of them. If there are no stones remaining on your turn, you lose. Each turn, each player chooses a pile that will maximize their probability of winning.

Given the initial size of the piles, and assuming it is your turn, determine your probability of winning.

Input

The first line contains the number T ($1 \leq T \leq 30$) giving the number of test cases. Each case will be given on a single line. The three numbers, P_1, P_2, P_3 will be separated by a single space ($0 \leq P_i \leq 50$).

Output

Output one line per test case giving your probability of winning. The answer should have exactly 4 digits after the decimal place.

Sample Input/Output

Input	Output
6 0 0 0 1 0 0 2 0 0 1 1 1 10 11 3 50 50 50	0.0000 1.0000 0.8333 1.0000 0.5015 0.5000