

12448 Casino Advantage

Several casinos in the Atlantic City are contemplating a new game to attract gamblers. In this game, a ball is rolled randomly into a roulette wheel partitioned into N slots (labelled $1, 2, \dots, N$). The label of the slot in which the ball lands is the result of the roll. The ball is then removed and another ball is rolled. A total of m balls are rolled.

The players make bets on the number of distinct numbers (K) appearing during the m rolls. The casinos wish to set the payout ratios for winning bets, such that the casinos will have a slight advantage over the gamblers. In particular, they need to know the probability of a bet being the winning bet. They have hired the Atlantic City Mathematicians (ACM) to help them with this problem: given values of N , M and K ($1 \leq N, M, K \leq 10$), compute the probability that K distinct values will appear when M balls are rolled into the roulette wheel with N slots. It is assumed that each roll is independent of the others, and each of the N results are equally likely for each roll.



They have hired the Atlantic City Mathematicians (ACM) to help them with this problem: given values of N , M and K ($1 \leq N, M, K \leq 10$), compute the probability that K distinct values will appear when M balls are rolled into the roulette wheel with N slots. It is assumed that each roll is independent of the others, and each of the N results are equally likely for each roll.

Input

The input starts with an integer T — the number of test cases ($T \leq 1000$). T cases follow on each subsequent line, each of them containing 3 integers — N , M and K .

Output

For each case, print the probability as a reduced fraction, following the format of the sample output. That is, print the probability in the form ' A/B ' where A and B have no common factors. If the probability is '0' or '1', just print the integer. A and B are guaranteed to fit into a signed 32-bit integer.

Sample Input

```
4
3 1 2
2 5 2
3 5 3
4 6 2
```

Sample Output

```
0
15/16
50/81
93/1024
```