

## 6544 Just Random

Description Coach Pang and Uncle Yang both love numbers. Every morning they play a game with number together. In each game the following will be done:

1. Coach Pang randomly choose a integer  $x$  in  $[a, b]$  with equal probability.
2. Uncle Yang randomly choose a integer  $y$  in  $[c, d]$  with equal probability.
3. If  $(x + y) \bmod p = m$ , they will go out and have a nice day together.
4. Otherwise, they will do homework that day.

For given  $a, b, c, d, p$  and  $m$ , Coach Pang wants to know the probability that they will go out.

### Input

The first line of the input contains an integer  $T$  denoting the number of test cases.

For each test case, there is one line containing six integers  $a, b, c, d, p$  and  $m$  ( $0 \leq a \leq b \leq 10^9$ ,  $0 \leq c \leq d \leq 10^9$ ,  $0 \leq m < p \leq 10^9$ ).

### Output

For each test case output a single line 'Case # $x$ :  $y$ '.  $x$  is the case number and  $y$  is a fraction with numerator and denominator separated by a slash ('/') as the probability that they will go out. The fraction should be presented in the simplest form (with the smallest denominator), but always with a denominator (even if it is the unit).

### Sample Input

```
4
0 5 0 5 3 0
0 999999 0 999999 1000000 0
0 3 0 3 8 7
3 3 4 4 7 0
```

### Sample Output

```
Case #1: 1/3
Case #2: 1/1000000
Case #3: 0/1
Case #4: 1/1
```