Recurring Fractions

? Ask Doubt

Time-Limit: 1 sec Score: 1.00/100 Difficulty :

Memory: 256 MB Accepted Submissions: 100 Relevant For: AZ-201 AZ-202

Description

Given two integers representing the numerator and denominator of a fraction, print the fraction in string format.
If the fractional part is repeating, enclose the repeating part in parentheses.
If multiple answers are possible, print the one which has the smallest length.

Input Format

The first line contains *T* (1 ≤ *T* ≤ 100000), the number of test cases.
Each of the next *T* lines contains two space-separated integers representing numerator and denominator respectively (0 ≤ |numerator| ≤ 100 and 1 ≤ |denominator| ≤ 100).
It is guaranteed that the denominator is always a non-zero integer.

Output Format

For each test case, print the fraction in string format.

Sample Input 1

Copy

```
4
1 2
2 1
2 3
-3 7
```

Sample Output 1

Copy

```
0.5
2
0.(6)
-0.(428571)
```

Note

Explanation 1:
1 / 2 = 0.5

Explanation 2:
2 / 1 = 2

Explanation 3:

C++14[GCC]

Submit

```
1
```