B. Limit

You are given two polynomials:

- $P(x) = a_0 \cdot x^n + a_1 \cdot x^{n-1} + \ldots + a_{n-1} \cdot x + a_n$ and
- $Q(x) = b_0 \cdot x^m + b_1 \cdot x^{m-1} + \ldots + b_{m-1} \cdot x + b_m$.

Calculate limit .

Input

The first line contains two space-separated integers n and m ($0 \le n, m \le 100$) — degrees of polynomials $P(x)$ and $Q(x)$ correspondingly.

The second line contains $n + 1$ space-separated integers — the factors of polynomial $P(x)$: $a_0, a_1, \ldots, a_{n-1}, a_n$ ($-100 \le a_i \le 100$, $a_0 \ne 0$).

The third line contains $m + 1$ space-separated integers — the factors of polynomial $Q(x)$: $b_0, b_1, \ldots, b_{m-1}, b_m$ ($-100 \le b_i \le 100$, $b_0 \ne 0$).

Output

If the limit equals $+\infty$, print "`Infinity`" (without quotes). If the limit equals $-\infty$, print "`-Infinity`" (without the quotes).

If the value of the limit equals zero, print "`0/1`" (without the quotes).

Otherwise, print an irreducible fraction — the value of limit , in the format "`p/q`" (without the quotes), where p is the — numerator, q ($q > 0$) is the denominator of the fraction.

Examples

input

```
2 1
1 1 1
2 5
```

output

```
Infinity
```

input

```
1 0
-1 3
2
```

output

```
-Infinity
```

input

```
0 1
1
1 0
```

output

```
0/1
```

input

```
1 1
9 0
-5 2
```

output

```
-9/5
```

Note

Let's consider all samples:

1.

You can learn more about the definition and properties of limits if you follow the link: `http://en.wikipedia.org/wiki/Limit_of_a_function`