

## 10375 Choose and divide

The binomial coefficient  $C(m, n)$  is defined as

$$C(m, n) = \frac{m!}{(m - n)! n!}$$

Given four natural numbers  $p, q, r,$  and  $s,$  compute the the result of dividing  $C(p, q)$  by  $C(r, s).$

### Input

Input consists of a sequence of lines. Each line contains four non-negative integer numbers giving values for  $p, q, r,$  and  $s,$  respectively, separated by a single space. All the numbers will be smaller than 10,000 with  $p \geq q$  and  $r \geq s.$

### Output

For each line of input, print a single line containing a real number with 5 digits of precision in the fraction, giving the number as described above. You may assume the result is not greater than 100,000,000.

### Sample Input

```
10 5 14 9
93 45 84 59
145 95 143 92
995 487 996 488
2000 1000 1999 999
9998 4999 9996 4998
```

### Sample Output

```
0.12587
505606.46055
1.28223
0.48996
2.00000
3.99960
```