Problem D: Choose and divide

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

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

The 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>=q and r>=s.

The 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

Output for Sample Input

0.12587 505606.46055 1.28223 0.48996 2.00000 3.99960