

A typical multi-speed bicycle has one or more gears in the front, where the pedals do the cranking, and one or more gears in the back, where the back wheel spins. Each gear has a whole number of teeth, and the chain can ride on any combination of a front gear and a back gear. The distance the bicycle travels per pedal revolution (and the amount of effort required) depends on the *gear ratio*, which is the ratio of the number of front gear teeth to the number of back gear teeth. For example, my bicycle has three front gears and nine back gears. In this problem, we will sort the gear combinations by gear ratio, from lowest to highest.

Input Format

There are two lines of input. The first line contains one or more distinct positive numbers separated by blanks, each number being the number of teeth on a front gear. The second line contains one or more distinct positive numbers separated by blanks, each number being the number of teeth on a back gear. The numbers on each line are not given in any particular order.

Output Format

The output will contain one gear combination per line, each being the concatenation of a number of front gear teeth, a colon (':'), and a number of back gear teeth. The lines should be sorted by increasing gear ratio. If there are two or more gear combinations having the same gear ratio, they should be output by increasing number of front gear teeth.

Input and Output Sample

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Input Sample

22 32 42
12 13 14 15 17 19 21 24 28

Output Sample

22:28
22:24
22:21
32:28
22:19
22:17
32:24
22:15
42:28
32:21
22:14
32:19
22:13
42:24
22:12
32:17
42:21
32:15
42:19
32:14
32:13
42:17
32:12
42:15
42:14
42:13
42:12