### Background

A collection of positive integers can be represented by rows of beads in non-increasing order, each row having the corresponding number of beads. The rows and columns of the resulting bead representation can then be flipped, to form its conjugate representation. Two examples

|  |  |  |  |
| --- | --- | --- | --- |
| Collection of positive integers | Bead representation | Conjugate bead representation | Conjugate collection of integers |
| { 5, 3, 1 } | ooooo  ooo  o | ooo  oo  oo  o  o | { 3, 2, 2, 1, 1 } |
| { 4, 2, 2 } | oooo  oo  oo | ooo ooo  o  o | { 3, 3, 1, 1 } |

### Problem

Write a program in your favorite programming language to obtain the conjugate of a collection of positive integers.