## Array Manipulator

Write a program that **reads an array of integers** from the console and **set of commands** and **executes them over the array**. The commands are as follows:

* **add <index> <element>** – adds element at the specified index (elements right from this position inclusively are shifted to the right).
* **addMany <index> <element 1> <element 2> … <element n>** – adds a set of elements at the specified index.
* **contains <element>** – prints the index of the first occurrence of the specified element (if exists) in the array or **-1** if the element is not found.
* **remove <index>** – removes the element at the specified index.
* **shift <positions>** – **shifts every element** of the array the number of positions **to the** **left** (with rotation).
  + For example, [1, 2, 3, 4, 5] -> shift 2 -> [3, 4, 5, 1, 2]
* **sumPairs** – sums the elements in the array by pairs (first + second, third + fourth, …).
  + For example, [1, 2, 4, 5, 6, 7, 8] -> [3, 9, 13, 8].
* **print** – stop receiving more commands and print the last state of the array.

### Examples

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| **Input** | **Output** |
| 1 2 4 5 6 7  add 1 8  contains 1  contains -3  print | 0  -1  [1, 8, 2, 4, 5, 6, 7] |
| 1 2 3 4 5  addMany 5 9 8 7 6 5  contains 15  remove 3  shift 1  print | -1  [2, 3, 5, 9, 8, 7, 6, 5, 1] |
| 2 2 4 2 4  add 1 4  sumPairs  print | [6, 6, 6] |
| 1 2 1 2 1 2 1 2 1 2 1 2  sumPairs  sumPairs  addMany 0 -1 -2 -3  print | [-1, -2, -3, 6, 6, 6] |