# Problem 2. Command Integers

You will be given **two lists** of **integers**. One of them are the **State Integers** and the other ones are the **Command Integers**. The task is to go through each of the **Command Integers** and perform the following **manipulations** based on the **parity** of the **command integer**:

* If the integer is **even**, **multiply** all **even numbers** in the **State Integers** by the **absolute value** of it.
* If the integer is **odd**, **divide** all the **odd numbers** in the **State Integers** by the **absolute value** of it.

Then, perform the next set of operations, based on the **sign** of the **command integer**:

* If the integer is **positive**, **add** it to any **positive** numbers
* If the integer is **negative**, **add** it to any **negative** numbers

*Note: use* ***integer division****, not* ***real number division****.*

## Input / Constraints

On the **first line** of the input, you will receive the **state integers**, separated by **spaces**.

On the **second line** of the input, you will receive the **command integers**, separated by **spaces**.

## Output

On the **only line** of the output, print the **final state** of the list.

## Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comments** |
| 1 2 -3 4 5  1 3 -2 -1 | [5, 8, -4, 8, 9] | Command int: **1**  **Multiply** all **odd numbers** by **abs(1)**  **Add** **1** to all **positive numbers**  Command int: **3**  **Divide** all **odd numbers** by **abs(3)**  **Add** **3** to all **positive numbers**  Command int: **-2**  **Multiply** all **even numbers** by **abs(-2)**  **Add** **-2** to all **negative numbers**  Command int: **-1**  **Divide** all **odd numbers** by **abs(-1)**  **Add** **-1** to all **negative numbers** |
| **Input** | **Output** | **Comments** |
| 5 -1 -2 42 -22  1 -1 3 11 | [0, -2, -1, 12, -8] |  |
| **Input** | **Output** | **Comments** |
| 0 2 1 2 0  2 3 2 3 2 3 | [0, 17, 8, 17, 0] |  |