

I see you soldier!

After your convincing victory against Reiner, your friend-turned-foe **Pieck** has backstabbed you and forced you to solve another challenging problem. Good luck on it!

Problem - [Leetcode 381](#)

Implement the `RandomizedCollection` class which has the following members:

- `RandomizedCollection()` Initializes the `RandomizedCollection` object.
- `bool insert(int val)` Inserts an item `val` into the multiset if not present. Returns `true` if the item was not present, `false` otherwise.
- `bool remove(int val)` Removes an item `val` from the multiset if present. Returns `true` if the item was present, `false` otherwise. Note that if `val` has multiple occurrences in the multiset, we only remove one of them.
- `int getRandom()` Returns a random element from the current multiset of elements (it's guaranteed that at least one element exists when this method is called). The probability of each element being returned is linearly related to the number of same values the multiset contains.

Example

Input

```
["RandomizedCollection", "insert", "insert", "insert", "getRandom", "remove", "getRandom"]
```

```
[[], [1], [1], [2], [], [1], []]
```

Output

```
[null, true, false, true, 2, true, 1]
```