



Queue

One of the important applications of queues is in operating systems. In operating systems that use paging techniques to manage virtual memory, page replacement algorithms decide which pages should be moved out of main memory and written to disk to free up space to allocate a new page. be provided One of these replacement algorithms is the FIFO algorithm, which stands for First In First Out. In this algorithm, the page that entered the memory the earliest is removed from the memory. In other words, the oldest page is pushed out of memory to make room for the new page. The logic of this method is that the page that was first brought to the memory, probably finished its work with it and will not be needed in the future. The FIFO algorithm is implemented by a queue. Any page at the front of the queue is replaced by a new page .(in the first line) and a **number of page numbers** (second line) and the output of the problem is the **number of page defects** . For more information about the details and solution of the example, refer to the following link:

<http://gardesh.blog.ir/1393/11/01/%D8%A2%D9%85%D9%88%D8%B2%D8%B4-%D8%A7%D9%84%DA%AF%D9%88%D8%B1%DB%8C%D8%AA%D9%85-fifo-%D9%86%D9%82%D8%B5-%D8%B5%D9%81%D8%AD%D9%87-%D8%AF%D8%B1-%D8%B3%DB%8C%D8%B3%D8%AA%D9%85-%D8%B9%D8%A7%D9%85%D9%84>

* *Sample input**



Questions

100

Queue

100

stack

All submissions

Final submissions

Scoreboard

Sample input

```
3
12
4 3 2 1 4 3 5 4 3 2 1 5
```

** Output**

```
9
```

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