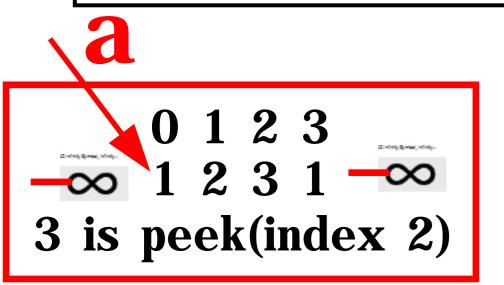
One dimensional peak

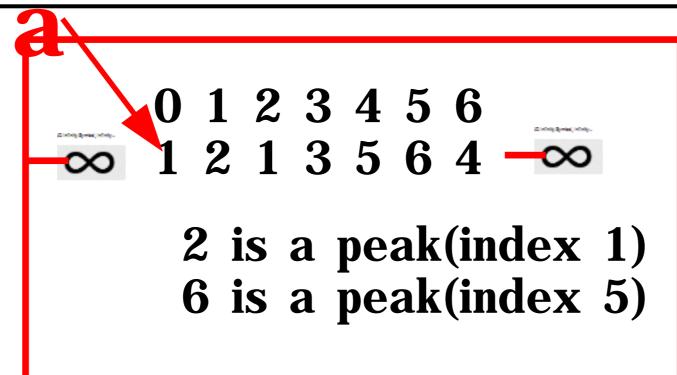
A peak element is an element that is strictly greater than its neighbors.

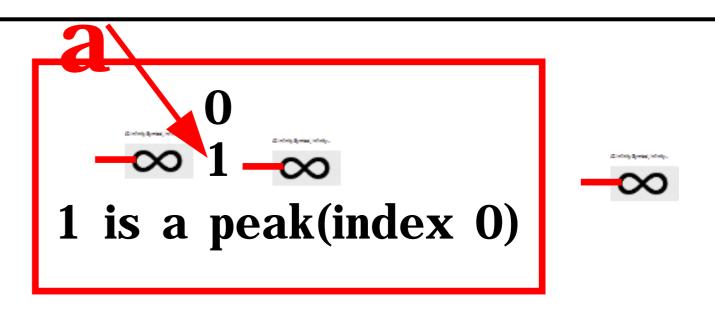
Given a 0-indexed integer array nums, find a peak element, and return its index.

If the array contains multiple peaks, return the index to any of the peaks.

a[i] != a[i + 1] for all valid i. (without this peak cannot exists?) You may imagine that a[-1] = a[n] = -INFINITY

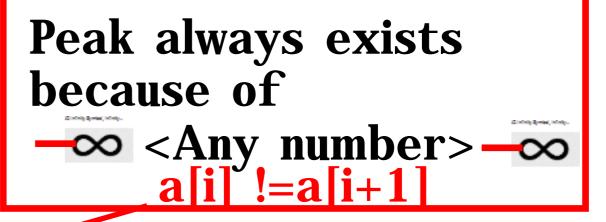






```
\begin{array}{c}
0 \ 1 \\
\hline
\infty \ 1 \ 3 \\
\hline
\end{array}
3 is a peak (index 1)
```

```
\begin{array}{c}
0 \ 1 \\
\hline
\infty \ 3 \ 1 \\
\hline
3 \ is a peak(index 0)
\end{array}
```



→ peak cannot exists
→ 1 1 1 1 → ∞