
Jumped Elements

X20478_en

Write a function `@jumps(a,k)` that receives a list of strictly positive integers a and an integer k , and returns the list of jumped elements in a starting from position k .

The list of jumped elements in list a starting from position k is defined as the list formed by element $a[k]$ followed by the list of jumped elements starting from position $k+a[k]$. If k is larger than the size of a , the result is an empty list.

For instance, given the list $a = [2, 1, 3, 5, 7, 2, 9, 5, 2, 4, 8]$ and starting position $k = 2$, the resulting list is $[3, 2, 5]$. That is, we start at position $k = 2$ finding element $a[k] = 3$. We advance 3 positions and reach element $a[k] = 2$. We thus advance 2 more positions and land on element $a[k] = 5$. We try to advance 5 positions but reach the end of the list, so we stop.

Sample session

```
>>> jumps([2, 1, 3, 5, 7, 2, 9, 5, 2, 4, 8], 0)
[2, 3, 4, 5]
>>> jumps([2, 1, 3, 5, 7, 4, 9, 5, 2, 5, 8], 1)
[1, 3, 4, 5]
>>> jumps([2, 1, 3, 5, 7, 4, 9, 5, 2, 5, 8], 3)
[5, 2, 8]
>>> jumps([2, 1, 3, 5, 7, 4, 9, 5, 2, 5, 8], 20)
[]
>>> jumps([2, 1, 3], 1) + jumps([2, 1, 3, 5, 7], 4)
[1, 3, 7]
```

Observations

If you want to test your program locally, remember to include the following lines at the end of the file:

```
if __name__ == "__main__":
    import doctest
    doctest.testmod(verbose=True)
```

Problem information

Author: ProAl

Generation: 2026-01-25T14:16:52.432Z

© Jutge.org, 2006–2026.

<https://jutge.org>