123. What is a property of a simple fillable array?

A. an element can be added anywhere in constant time
B. any element can be removed in constant time
C. more that one element can be next to an empty slot
D. elements are presumed to be contiguous

It seems like there are multiple correct options?

Subject: Re: Question #123
Posted by btrichey on Mon, 23 Jan 2017 01:49:27 GMT

A and B are wrong because you have to shift the other elements. C and D contradict each other and I'm pretty sure the answer is D.

Subject: Re: Question #123
Posted by sbcarp on Mon, 23 Jan 2017 03:45:51 GMT

:dd thanks

Subject: Re: Question #123
Posted by cdyancey on Mon, 23 Jan 2017 17:27:52 GMT

Yes, the answer is D.

If I am not mistaken, all elements in an array can be ACCESSED in constant time (something to do with RAM), but adding or removing them requires shifts. I don't really understand answer C, but I know I've read on multiple websites that elements in arrays are contiguous (it's also in the Encyclopedia of Elementary Data Structures somewhere).

Subject: Re: Question #123
Posted by cdyancey on Mon, 23 Jan 2017 20:39:47 GMT

Now I'm second guessing myself because I can't find that arrays are necessarily contiguous in the
Encyclopedia. Do you have to shift elements in an array when you remove one?

Subject: Re: Question #123
Posted by lusth on Mon, 23 Jan 2017 21:25:00 GMT

> No shifting if removing from the "back".

Fillable arrays have contiguous filled and contiguous unfilled portions.