

634192

What is a shorter way to write `if(p == NULL)` ?

- a. `if(p)`
- *b. `if(!p)`
- c.
- d.
- e.
- f. `"`
- g. `"`

General Feedback:

Answer is B.

632312

An example of something that could be built using a QueueADT is a structure that models:

- a. The undo operation in a word processor
- b. the back button in a web browser
- *c. the customers waiting to talk to an online helpdesk
- d. a hundred names in alphabetical order, where names are added and removed frequently
- e. the roads and intersections in a city
- f. `"`
- g. `"`
- h. `"`
- i. `"`
- j. `"`

General Feedback:

Choices A and B are applications where when you delete, you need to delete the item that was added most recently (a LIFO structure). This is not possible in a queue, where you always delete the item that was added **first**.

Choice D is an application where you need to be able to delete from the beginning, middle, or end of the structure, something that is also impossible in a queue.

Choice E is an application where a element (an intersection) could be connected to several other elements. This is also impossible in a queue.

Choice C is the only one where it makes sense to retrieve the elements in the order in which they arrived.

633221

This sorting algorithm splits the collection into two halves, sorts the two halves independently, and combines the results.

- a. selection sort
- b. insertion sort
- c. bubble sort
- d. quick sort
- *e. merge sort
- f. "
- g. "
- h. "
- i. "
- j. "

General Feedback:

Merge sort splits the collection, sorts the two halves, and merges them.