

Lecture 08 Ticket

COSC 311: Algorithms, Fall 2022

Name: _____

Give an argument that every (correct) sorting algorithm requires $\Omega(n)$ elementary operations (e.g., compare and swap) to sort arrays of size n . Your argument doesn't need to be mathematically formal—an intuitive explanation is sufficient.

Hint. What can you say about an algorithm that uses $\ll n$ operations on an array of size n ?