

EE 200 Lecture 18: Algorithm analysis and sorting

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Big-O notation

What is the Big-O?

Find the largest element of an array

What is the Big-O?

Find the two numbers that are closest to each other

What is the Big-O?

Find the two numbers that are furthest to each other

What is the Big-O?

All of the English words that can be made with a set of letters
(e.g., playing Scrabble)

What is an intractable problem?

Anything with exponential time (or worse) that can't be solved exactly for meaningfully large N .

These are "NP-hard" (non-polynomial)

Sorting algorithms

Bubble sort

Insertion sort

Mergesort

Quicksort