



















## **Picking the Pivot**

- There are several ways to pick a pivot.
- Objective: Choose a pivot so that we will get 2 partitions of (almost) equal size.



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## Picking the Pivot (3)

- Use the median of the array (ideal pivot)
  - The N/2 th largest element
  - · Partitioning always cuts the array into roughly half
  - An optimal quick sort (O(N log N))
  - · However, hard to find the exact median
- Median-of-three partitioning
  - eliminates the bad case for sorted input.
  - reduces the number of comparisons by 14%.



























