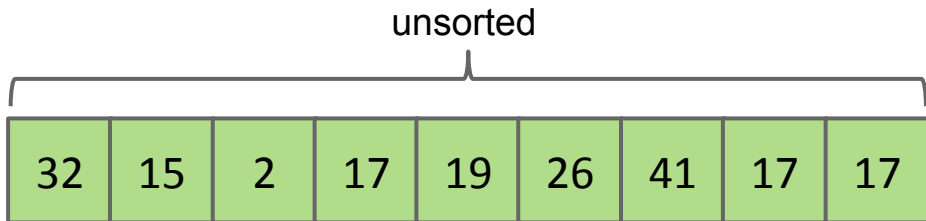


Quick Sort

Quick sorting N items:

- Partition on leftmost item.
- Quicksort left half.
- Quicksort right half.

Input:



Quick Sort

Quick sorting N items:

partition(32)

- **Partition on leftmost item (32).**
- Quicksort left half.
- Quicksort right half.

Input:

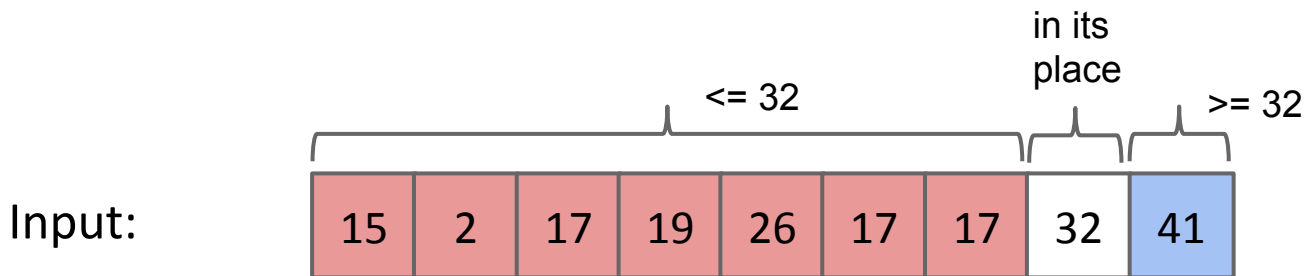
32	15	2	17	19	26	41	17	17
----	----	---	----	----	----	----	----	----

Quick Sort

Quick sorting N items:

partition(32)

- **Partition on leftmost item (32).**
- Quicksort left half.
- Quicksort right half.



Quick Sort

Quick sorting N items:

partition(32)

- **Partition on leftmost item (32) (done).**
- Quicksort left half.
- Quicksort right half.

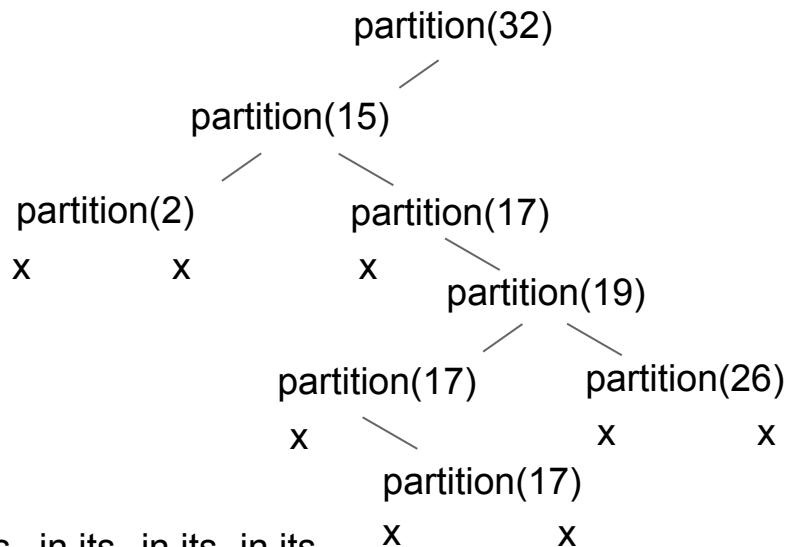
Input:



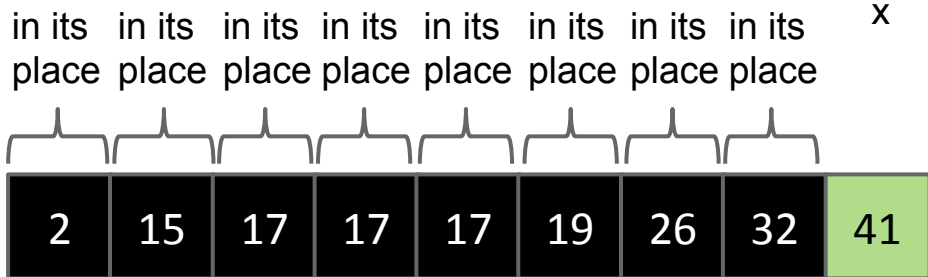
Quick Sort

Quick sorting N items:

- Partition on leftmost item (32) (done).
- **Quicksort left half (details not shown).**
- Quicksort right half.



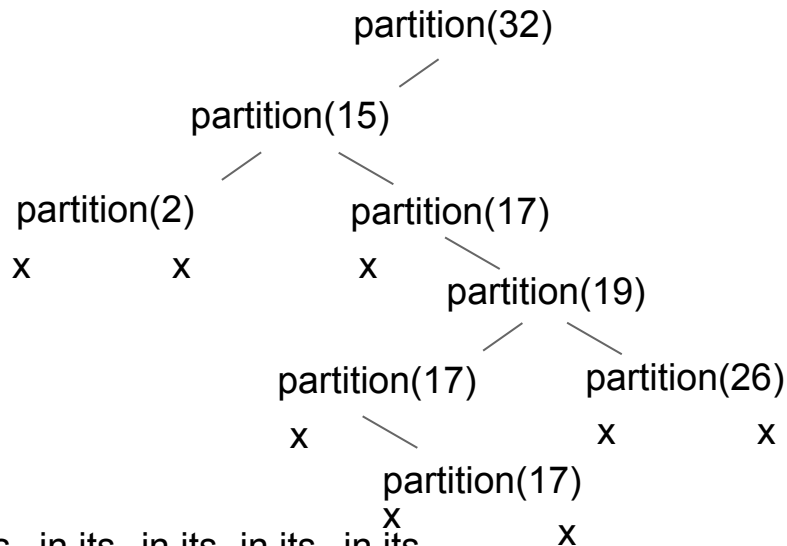
Input:



Quick Sort

Quick sorting N items:

- Partition on leftmost item (32) (done).
- Quicksort left half (details not shown).
- **Quicksort right half (details not shown).**



Input:

in its place	in its place	in its place	in its place	in its place	in its place	in its place	in its place	in its place
2	15	17	17	17	19	26	32	41

Quicksort Complete (Extra)

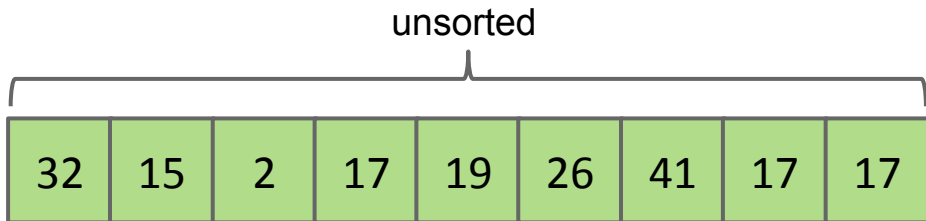
(for those of you who don't fully trust the recursion)

Quick Sort

Quick sorting N items:

- Partition on leftmost item.
- Quicksort left half.
- Quicksort right half.

Input:



Quick Sort

Quick sorting N items:

partition(32)

- **Partition on leftmost item (32).**
- Quicksort left half.
- Quicksort right half.

Input:

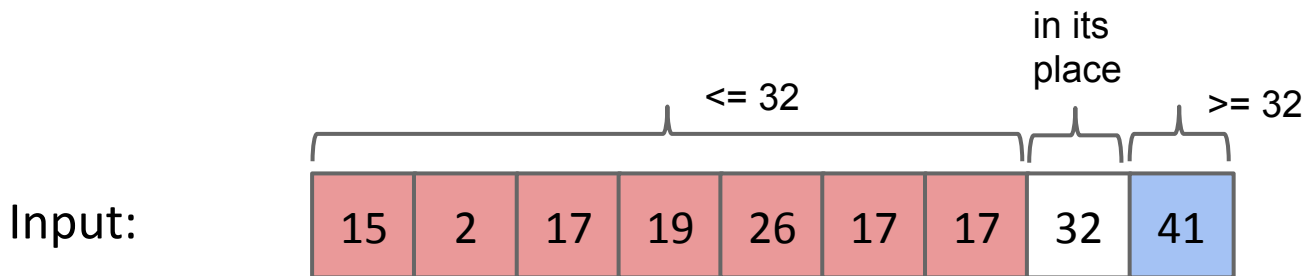
32	15	2	17	19	26	41	17	17
----	----	---	----	----	----	----	----	----

Quick Sort

Quick sorting N items:

partition(32)

- **Partition on leftmost item (32) (done).**
- Quicksort left half.
- Quicksort right half.



Quick Sort

Quick sorting N items:

partition(32)

- Partition on leftmost item (32) (done).
- **Quicksort left half (up next).**
- Quicksort right half.

Input:



Quick Sort

Quick sorting N items:

- **Partition on leftmost item (15).**
- Quicksort left half.
- Quicksort right half.

partition(32)
partition(15)

Input:

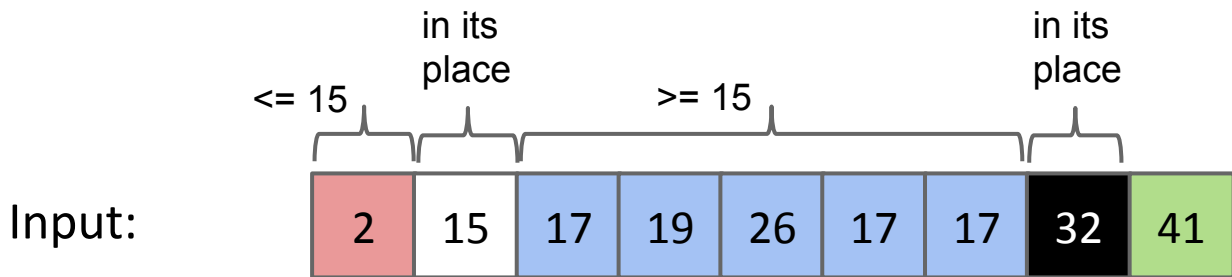


Quick Sort

Quick sorting N items:

- **Partition on leftmost item (15) (done).**
- Quicksort left half.
- Quicksort right half.

partition(32)
partition(15)



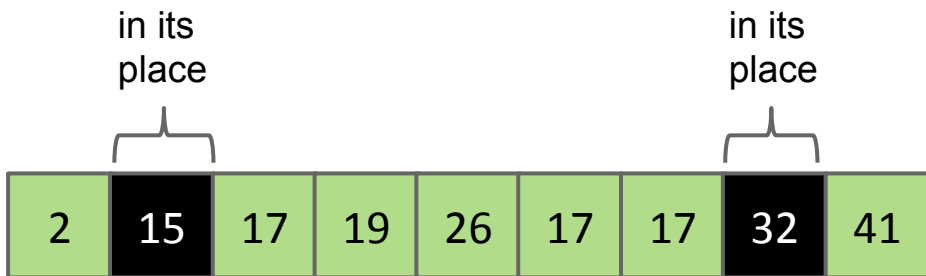
Quick Sort

Quick sorting N items:

- Partition on leftmost item (15) (done).
- **Quicksort left half (up next).**
- Quicksort right half.

partition(32)
/
partition(15)

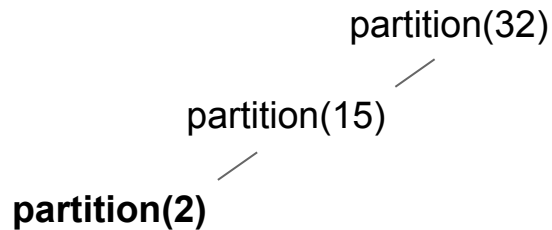
Input:



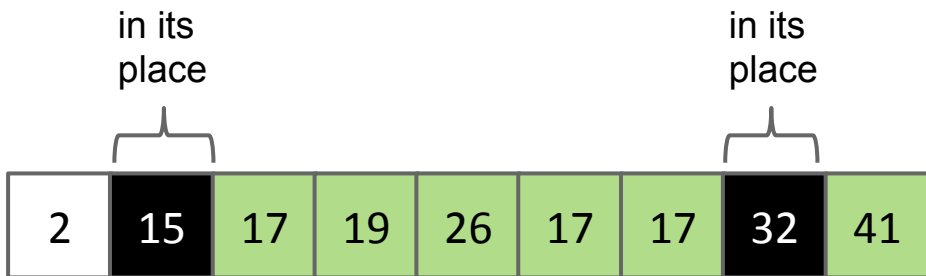
Quick Sort

Quick sorting N items:

- **Partition on leftmost item (2).**
- Quicksort left half.
- Quicksort right half.



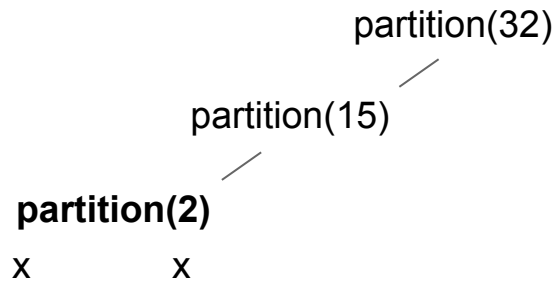
Input:



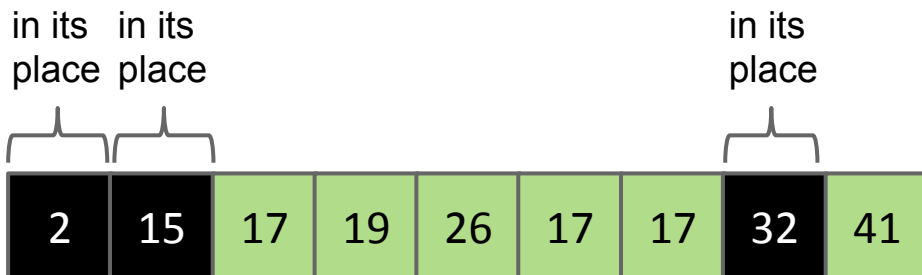
Quick Sort

Quick sorting N items:

- Partition on leftmost item (2) (done).
- **Quicksort left half (size zero, done).**
- **Quicksort right half (size zero, done).**



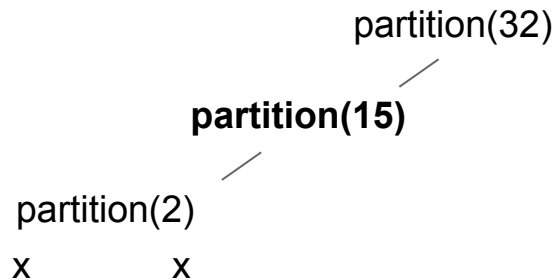
Input:



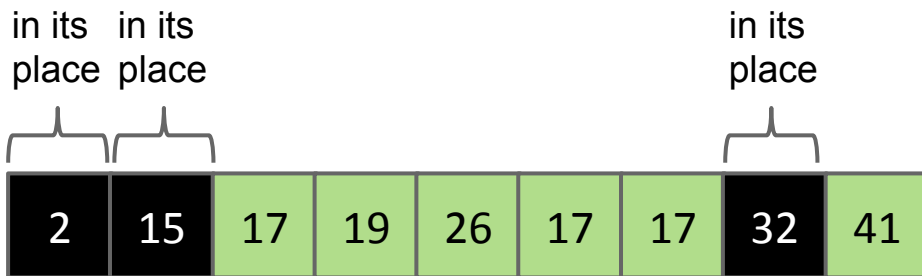
Quick Sort

Quick sorting N items:

- Partition on leftmost item (2) (done).
- Quicksort left half (done).
- **Quicksort right half (up next).**



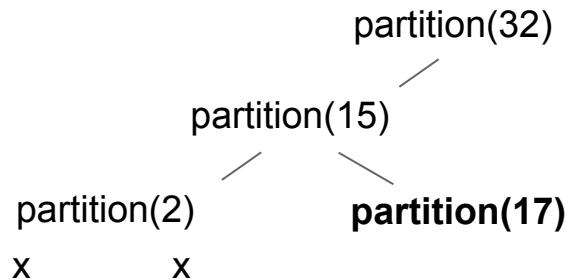
Input:



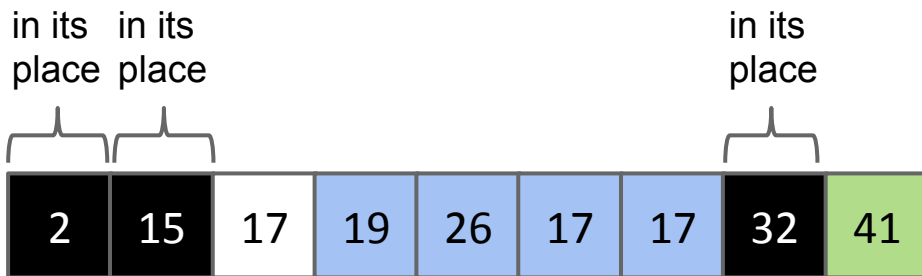
Quick Sort

Quick sorting N items:

- Partition on leftmost item (17)
- Quicksort left half.
- Quicksort right half.



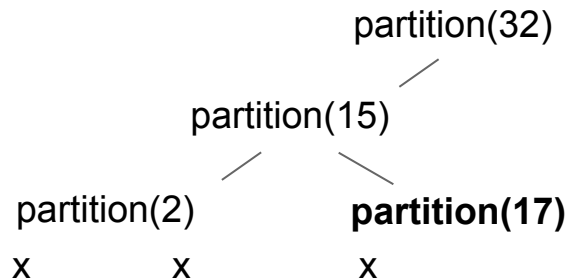
Input:



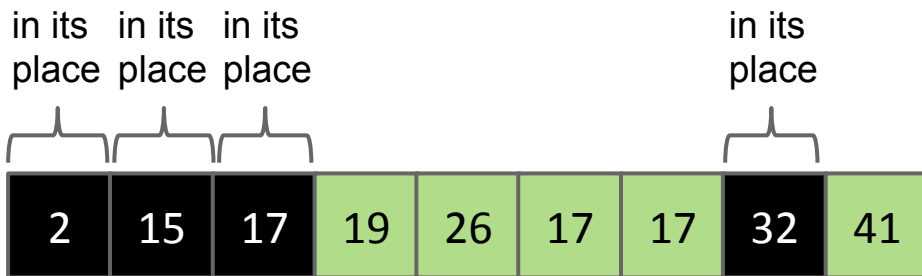
Quick Sort

Quick sorting N items:

- Partition on leftmost item (17) (done).
- **Quicksort left half (size zero, done).**
- **Quicksort right half (up next).**



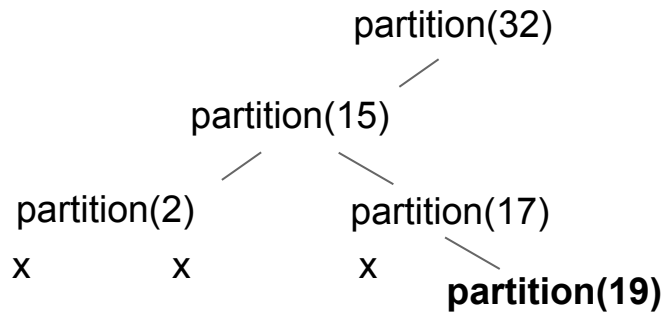
Input:



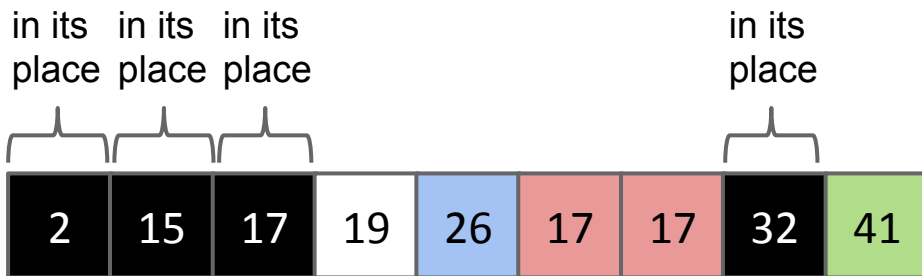
Quick Sort

Quick sorting N items:

- Partition on leftmost item (19).
- Quicksort left half.
- Quicksort right half.



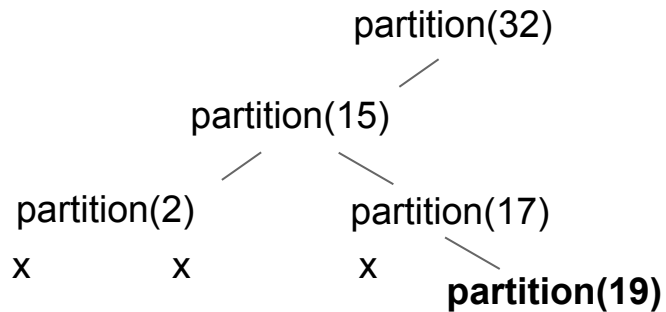
Input:



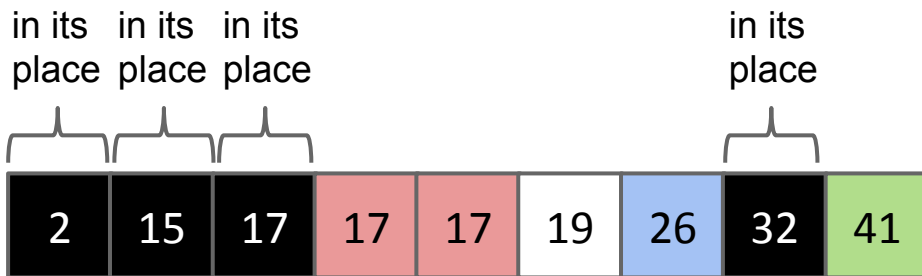
Quick Sort

Quick sorting N items:

- **Partition on leftmost item (19) (done).**
- Quicksort left half.
- Quicksort right half.



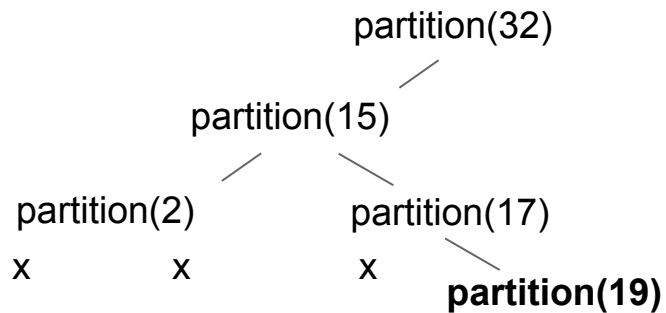
Input:



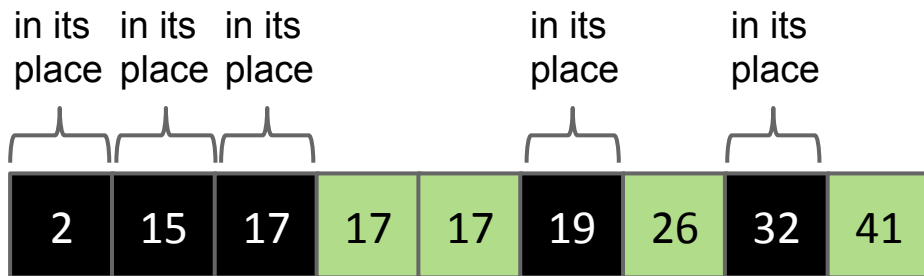
Quick Sort

Quick sorting N items:

- Partition on leftmost item (19).
- **Quicksort left half (up next).**
- Quicksort right half.



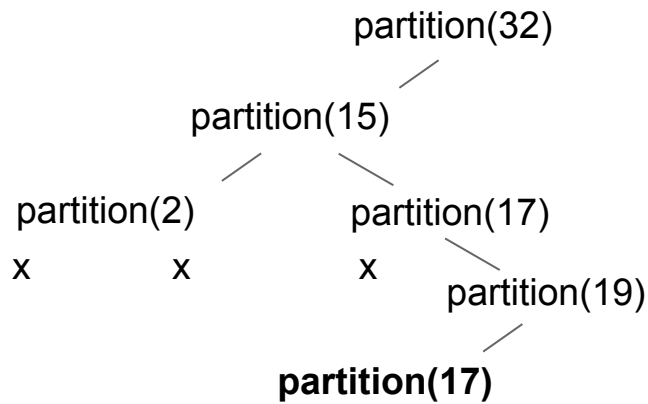
Input:



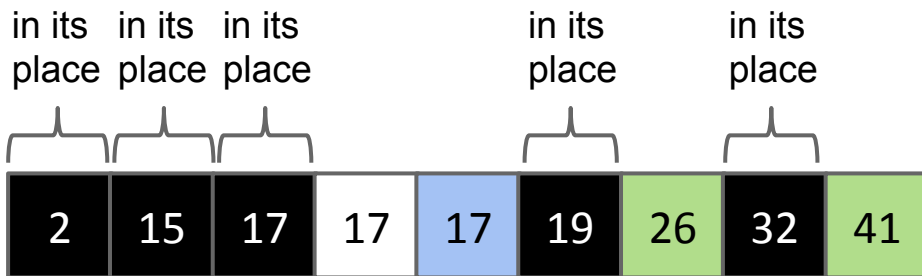
Quick Sort

Quick sorting N items:

- Partition on leftmost item (17).
- Quicksort left half.
- Quicksort right half.



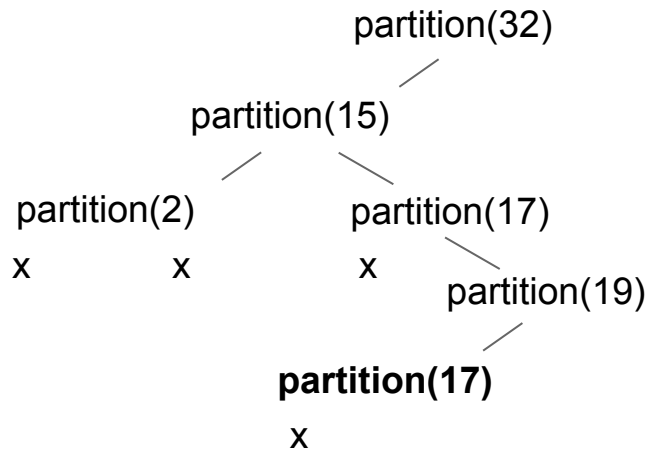
Input:



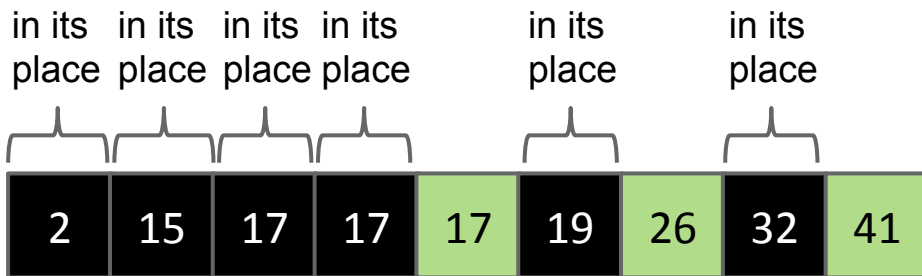
Quick Sort

Quick sorting N items:

- Partition on leftmost item (17) (done).
- **Quicksort left half (size zero, done).**
- **Quicksort right half (up next).**



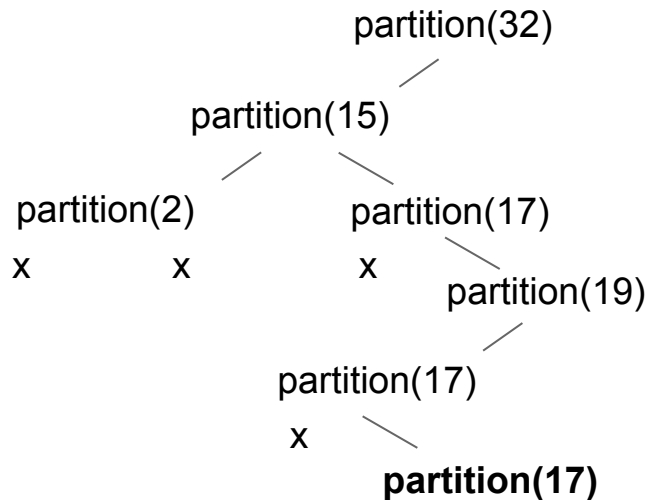
Input:



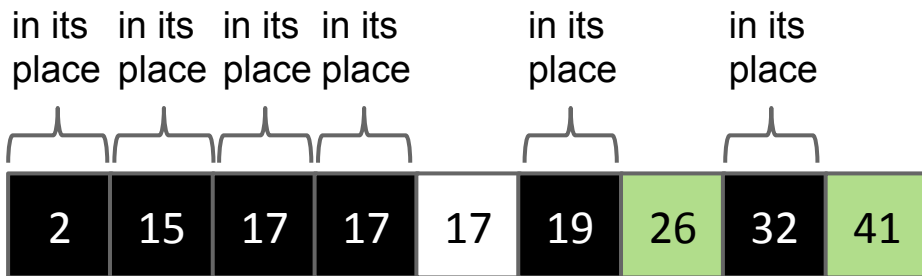
Quick Sort

Quick sorting N items:

- Partition on leftmost item (17).
- Quicksort left half.
- Quicksort right half.



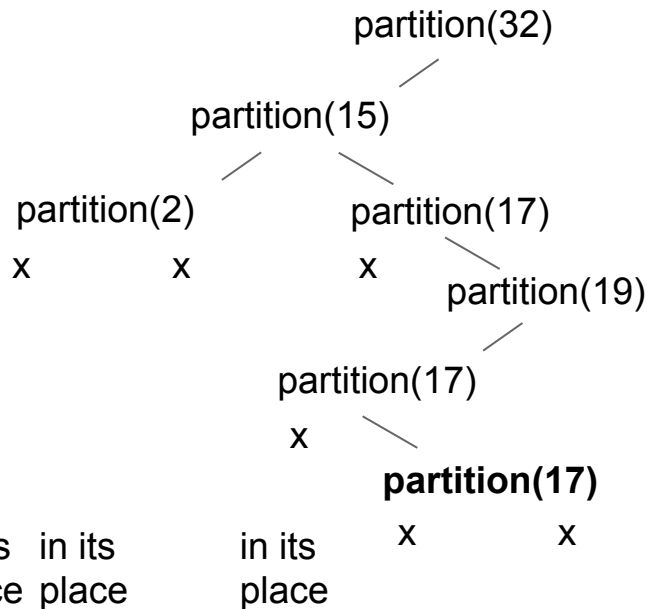
Input:



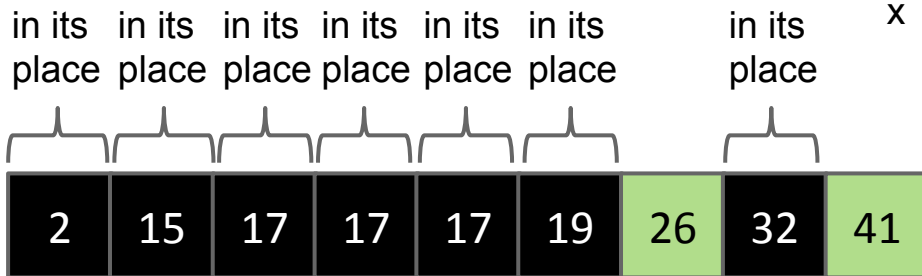
Quick Sort

Quick sorting N items:

- Partition on leftmost item (17) (done).
- **Quicksort left half (size zero, done).**
- **Quicksort right half (size zero, done).**



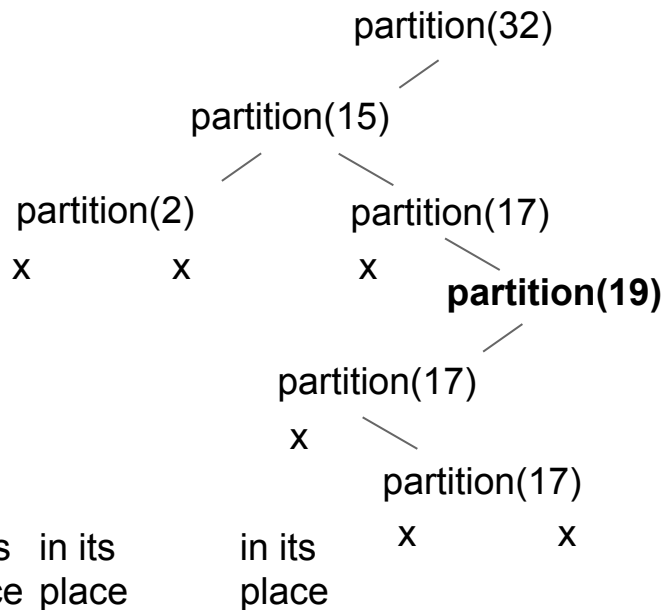
Input:



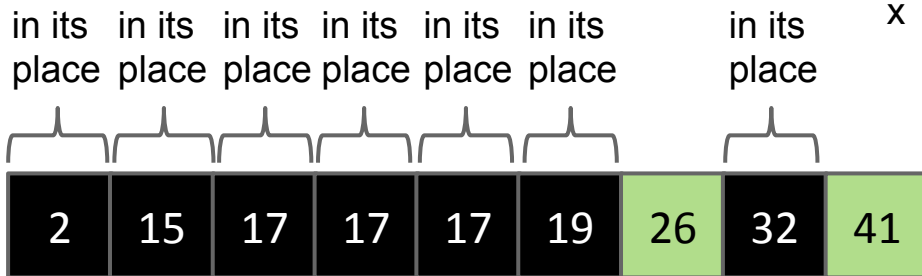
Quick Sort

Quick sorting N items:

- Partition on leftmost item (19) (done).
- Quicksort left half (done).
- **Quicksort right half (up next).**



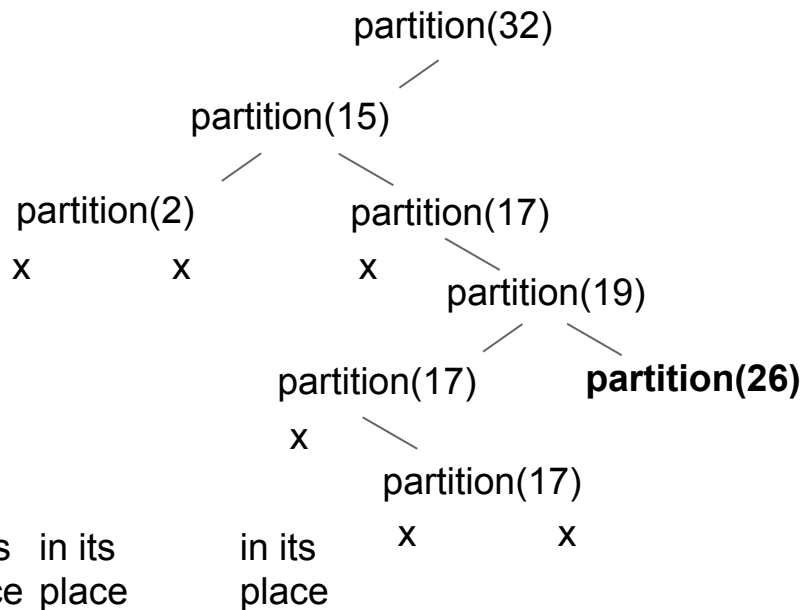
Input:



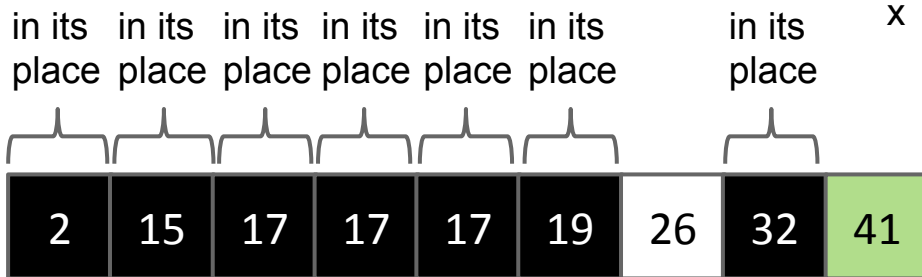
Quick Sort

Quick sorting N items:

- Partition on leftmost item (26).
- Quicksort left half.
- Quicksort right half.



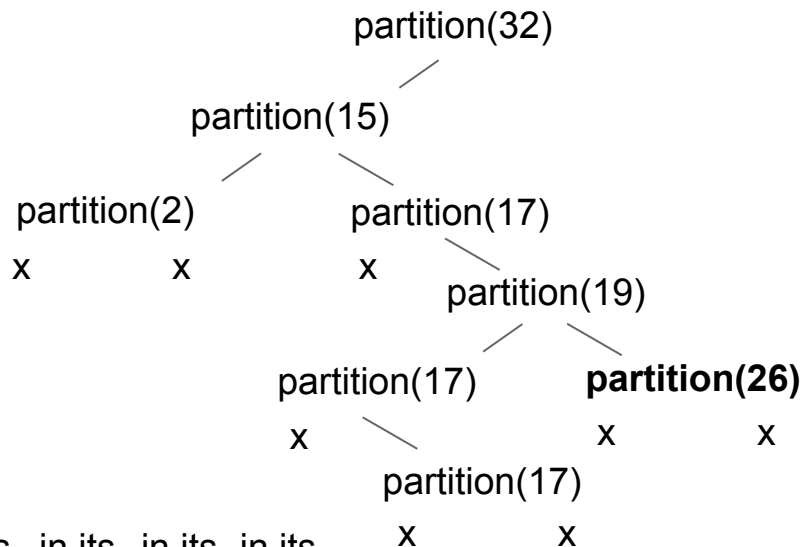
Input:



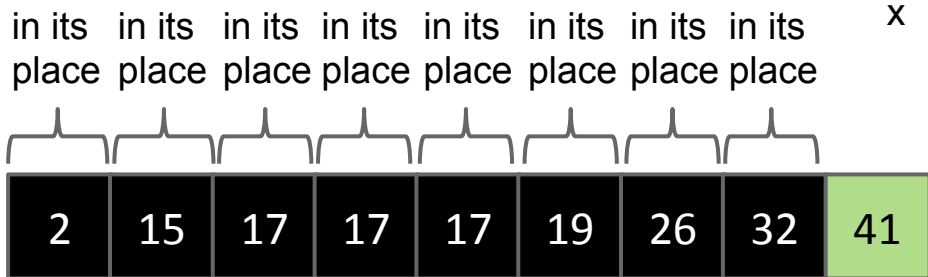
Quick Sort

Quick sorting N items:

- Partition on leftmost item (26) (done).
- **Quicksort left half (size zero, done).**
- **Quicksort right half (size zero, done).**



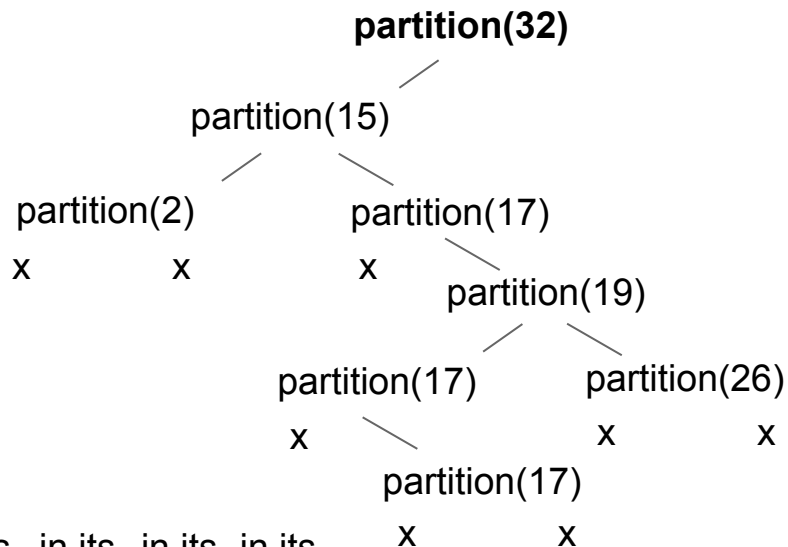
Input:



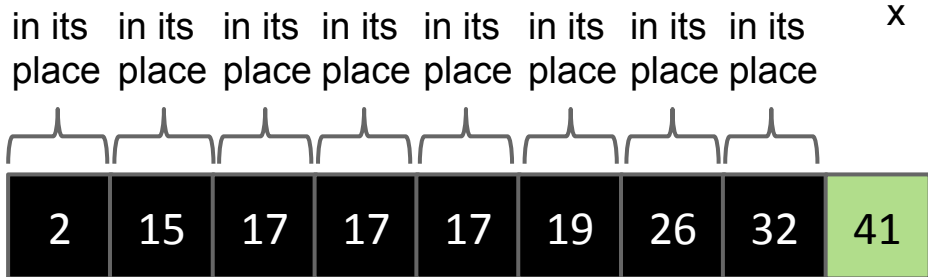
Quick Sort

Quick sorting N items:

- Partition on leftmost item (32) (done).
- Quicksort left half (done).
- **Quicksort right half (up next).**



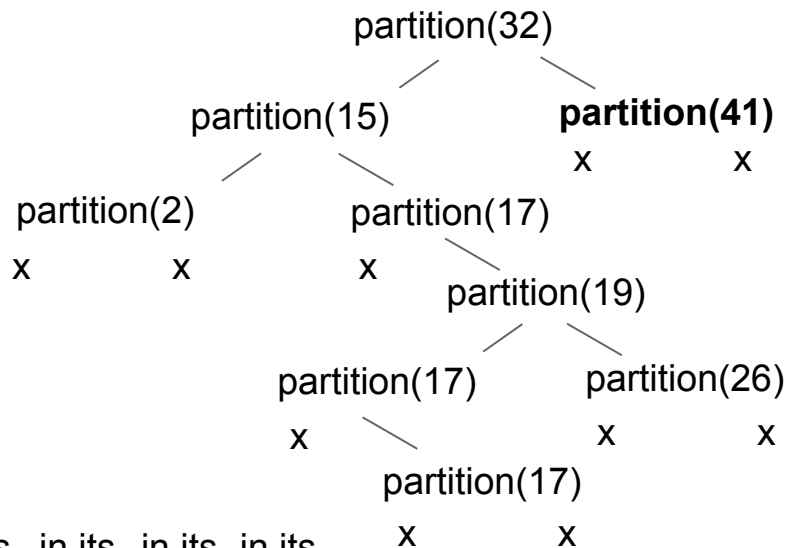
Input:



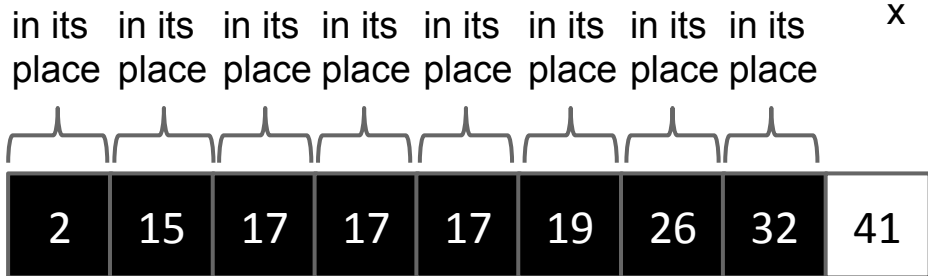
Quick Sort

Quick sorting N items:

- **Partition on leftmost item (41).**
- Quicksort left half.
- Quicksort right half.



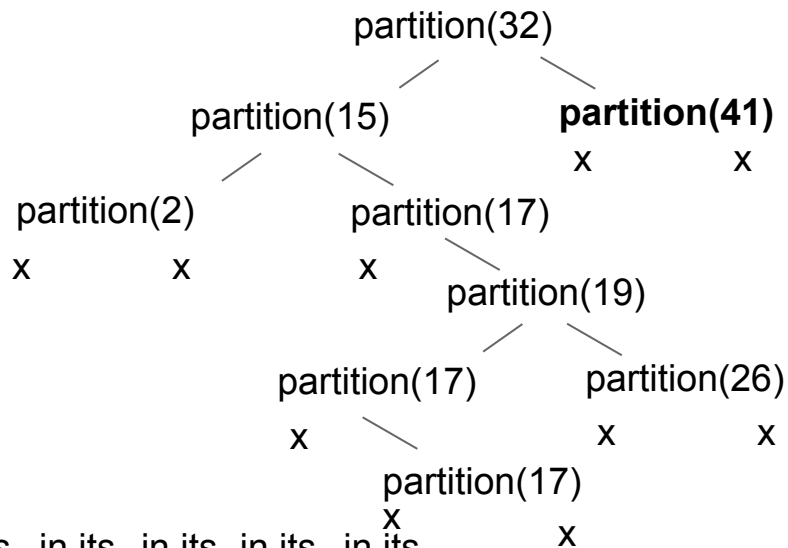
Input:



Quick Sort

Quick sorting N items:

- Partition on leftmost item (41) (done).
- **Quicksort left half (size zero, done).**
- **Quicksort right half (size zero, done).**



in its in its in its in its in its in its in its in its in its
place place place place place place place place place

Input:

2	15	17	17	17	19	26	32	41
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