

Partition array so that:

- Entry a[j] is in place.
- No larger entry to the left of j.
- No smaller entry to the right of j.

Repeat in one subarray, depending on j; finished when j equals k.

select element of rank k = 5

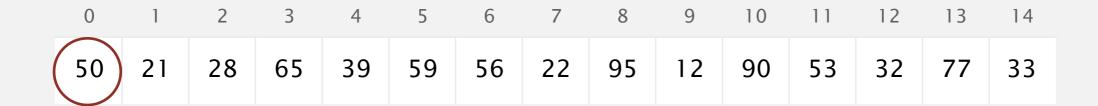
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
50	21	28	65	39	59	56	22	95	12	90	53	32	77	33

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partition on leftmost entry



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partitioned array



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can safely ignore right subarray

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
22	21	28	33	39	32	12	50	95	56	90	53	59	77	65

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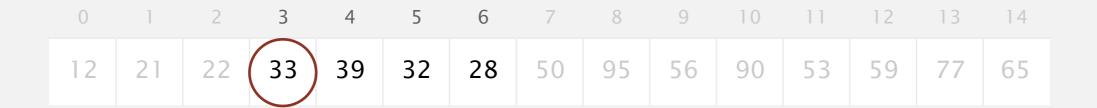
can safely ignore left subarray

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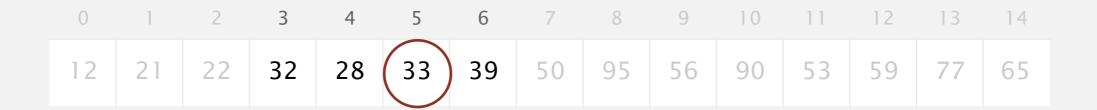


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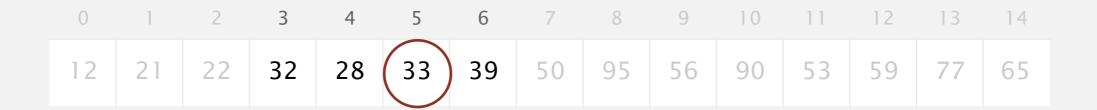


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stop: partitioning item is at index k



$$k = 5$$