

Inversions between two lists

- Given two **sorted** halves, count number of inversions where a_i and a_j are in different halves.

$i = 6$



3	7	10	14	18	19
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2	11	16	17	23	25
---	----	----	----	----	----

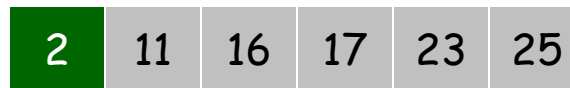
two sorted halves

Total:

Inversions between two lists

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$i = 6$



two sorted halves

6

Total: 6

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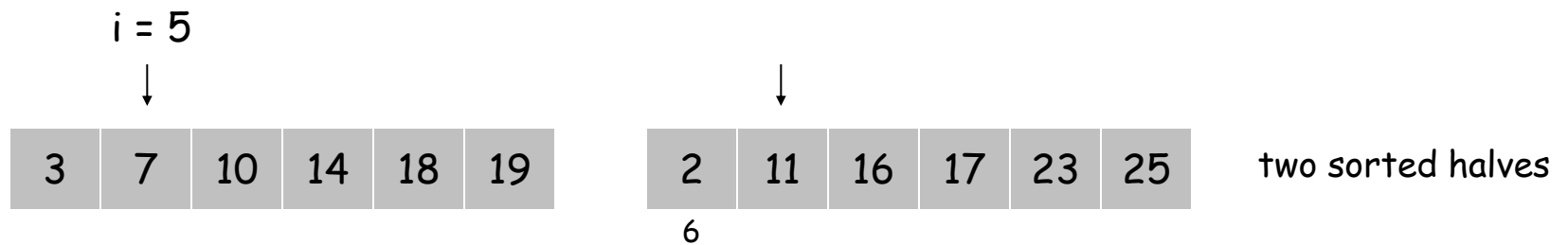
two sorted halves

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Total: 6

Inversions between two lists

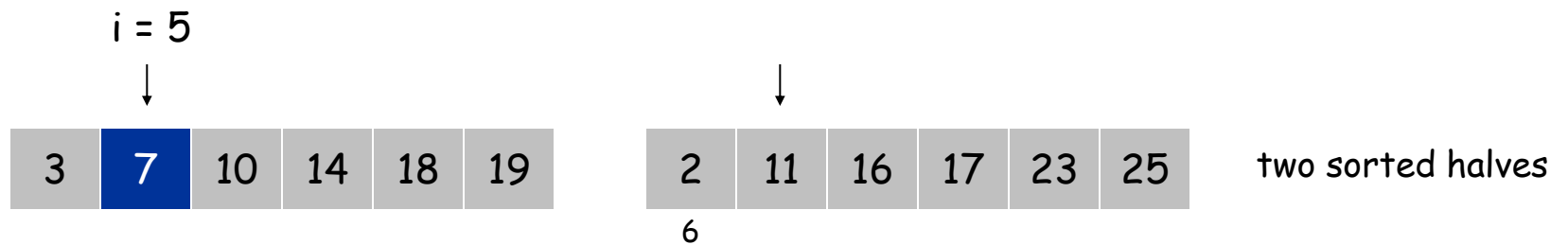
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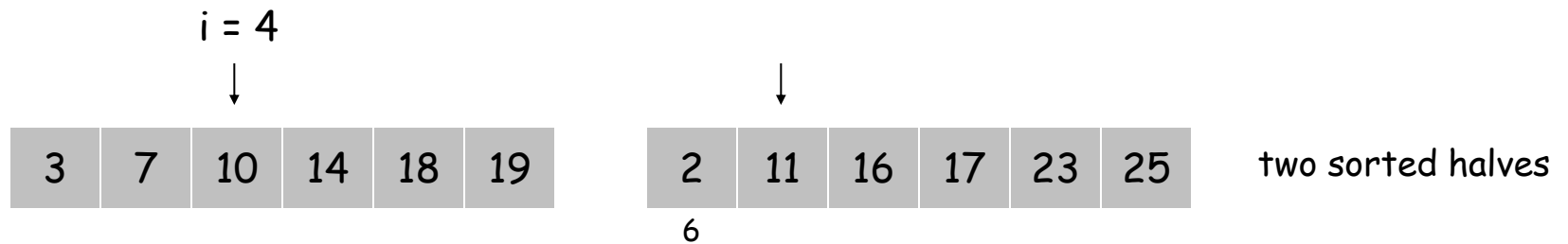
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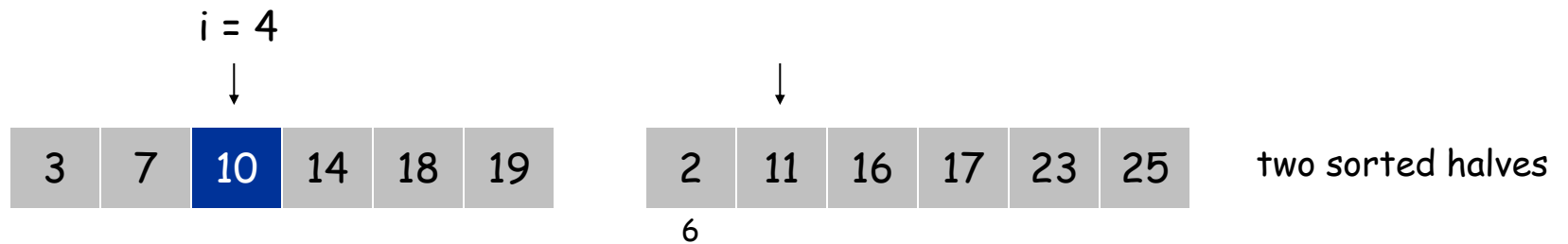
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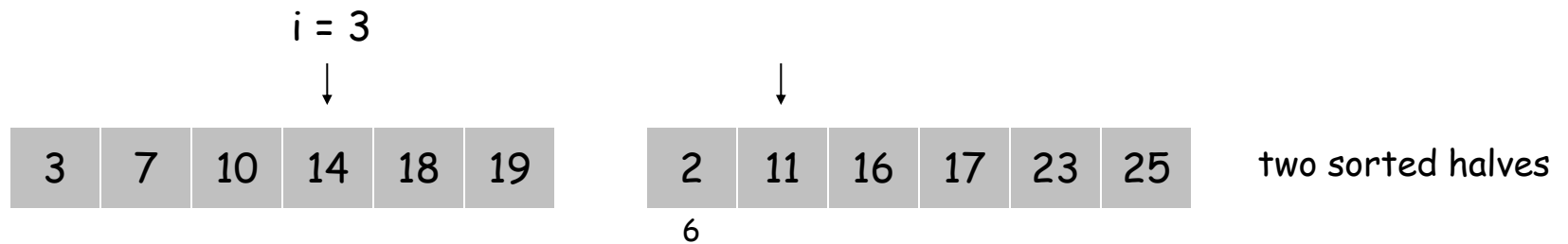
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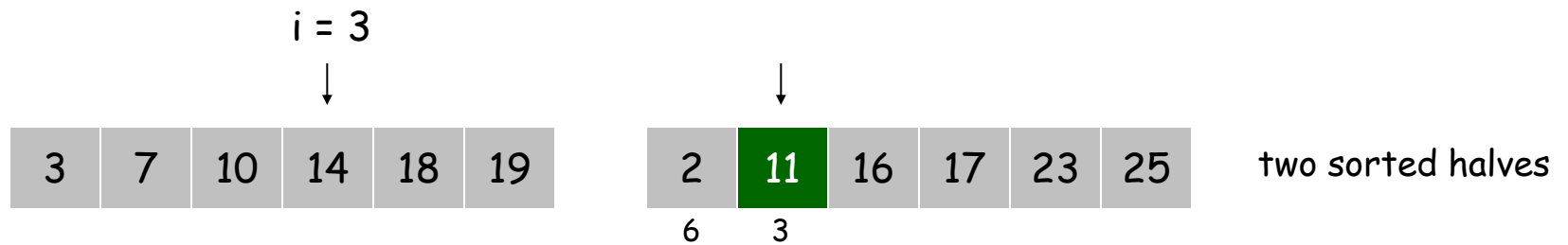
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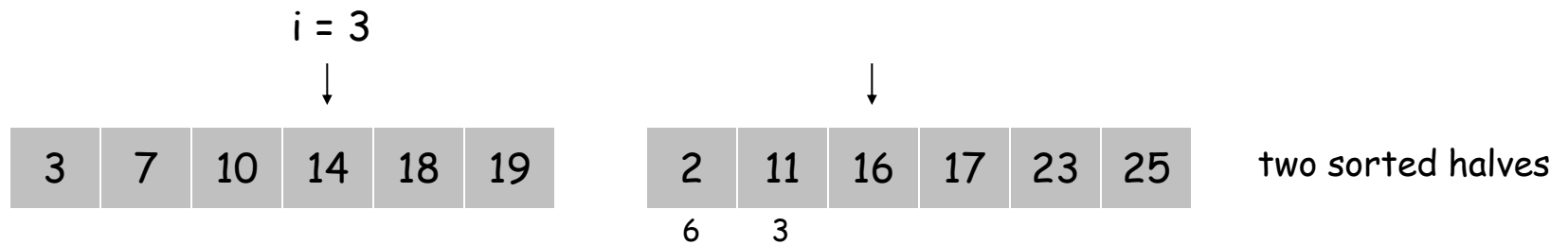
- Given two **sorted** halves, count number of inversions where a_i and a_j are in different halves.



Total: 6 + 3

Inversions between two lists

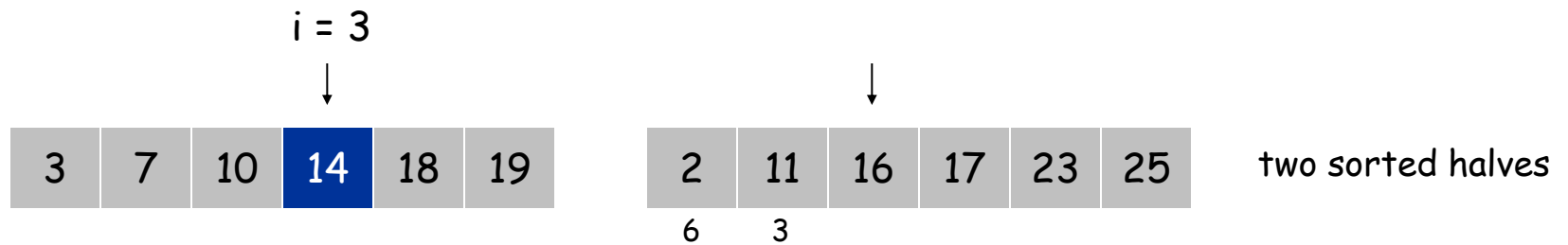
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Inversions between two lists

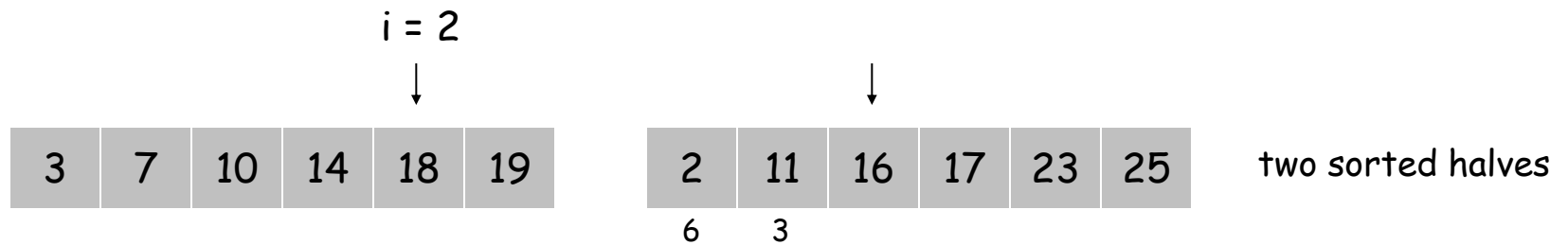
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Inversions between two lists

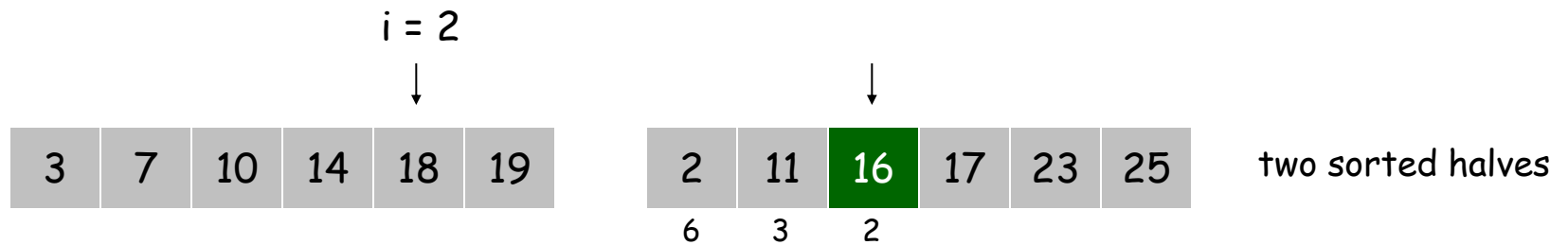
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Inversions between two lists

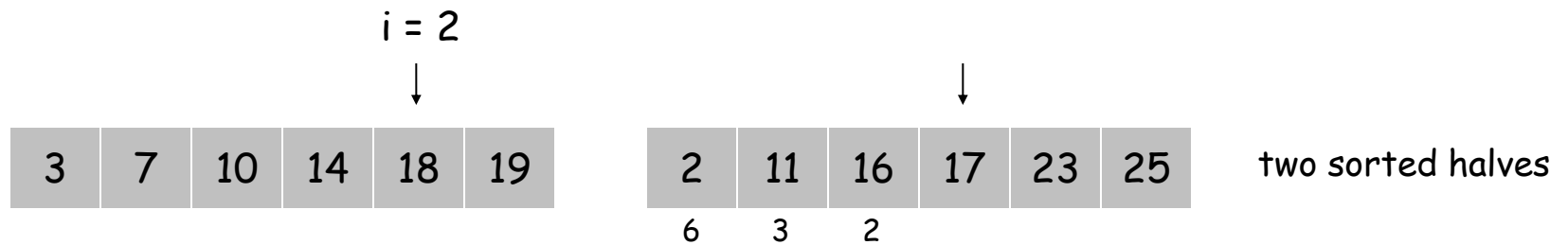
- Given two **sorted** halves, count number of inversions where a_i and a_j are in different halves.



Total: $6 + 3 + 2$

Inversions between two lists

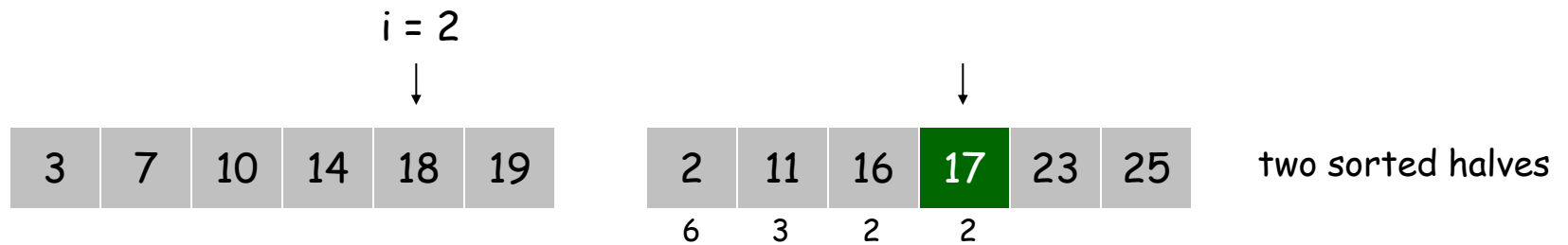
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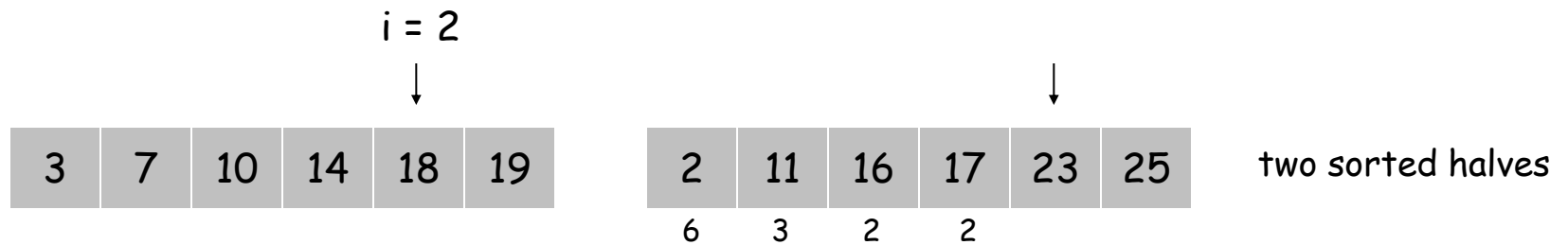
- Given two **sorted** halves, count number of inversions where a_i and a_j are in different halves.



Total: $6 + 3 + 2 + 2$

Inversions between two lists

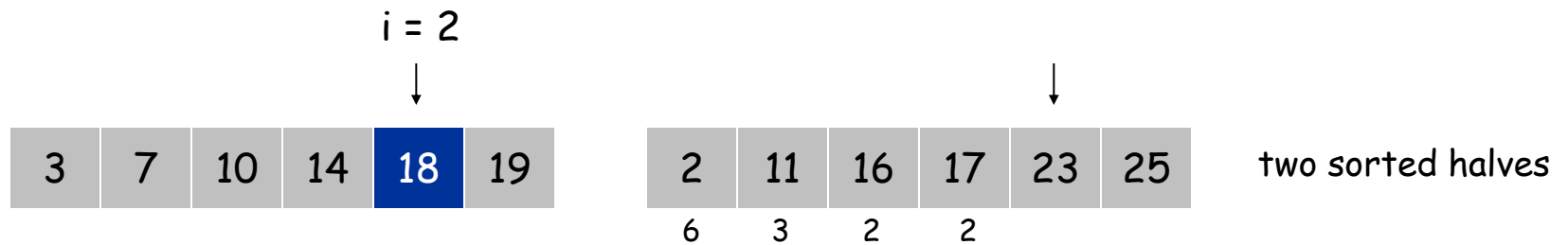
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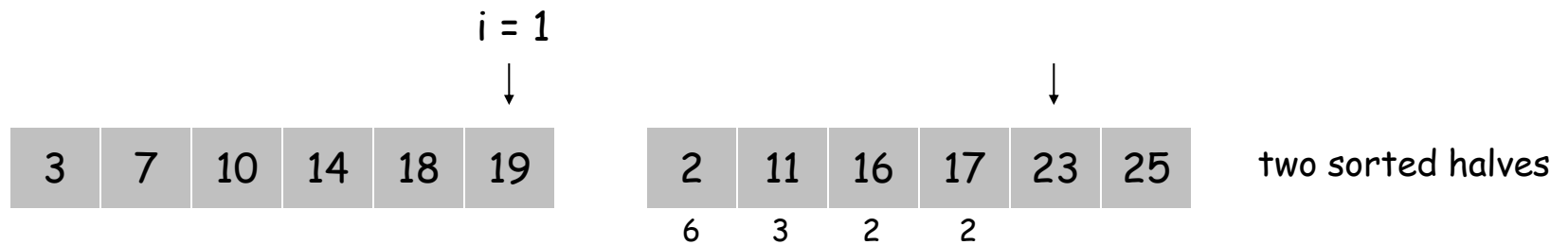
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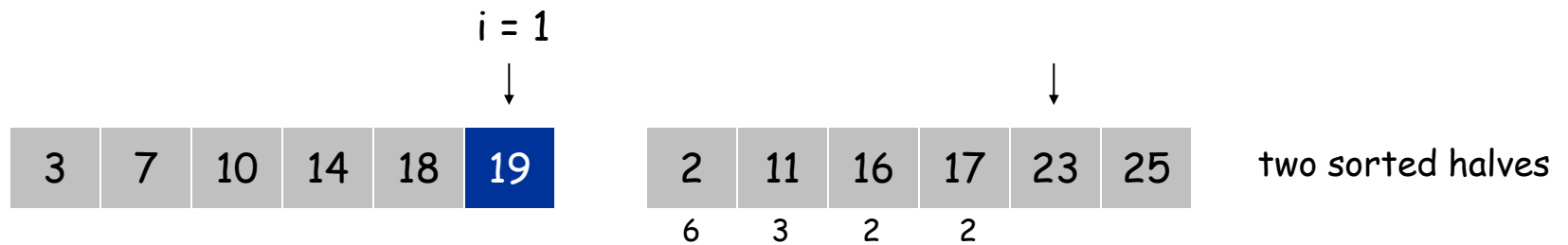
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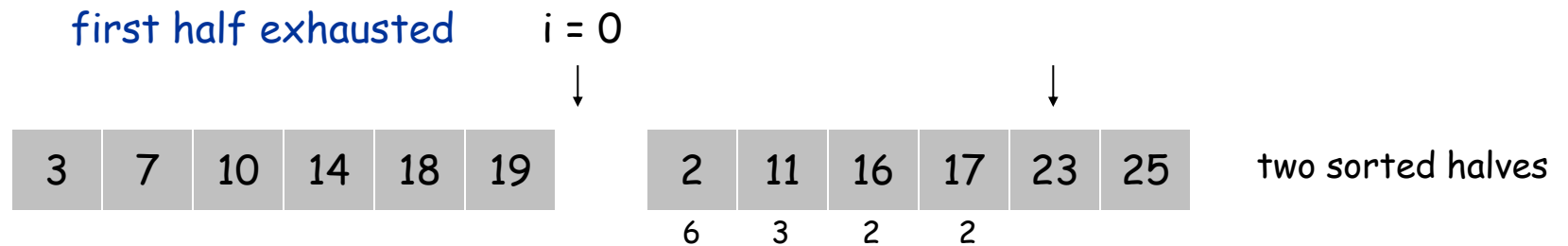
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Inversions between two lists

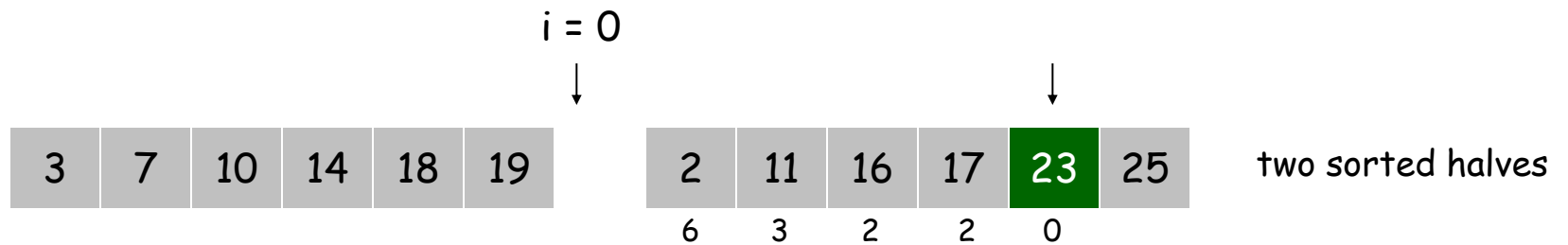
- Given two **sorted** halves, count number of inversions where a_i and a_j are in different halves.



Total: $6 + 3 + 2 + 2$

Inversions between two lists

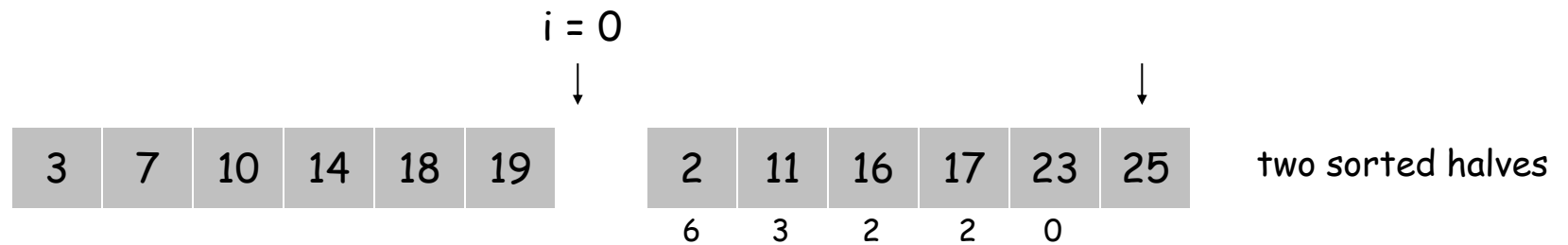
- Given two **sorted** halves, count number of inversions where a_i and a_j are in different halves.



Total: $6 + 3 + 2 + 2 + 0$

Inversions between two lists

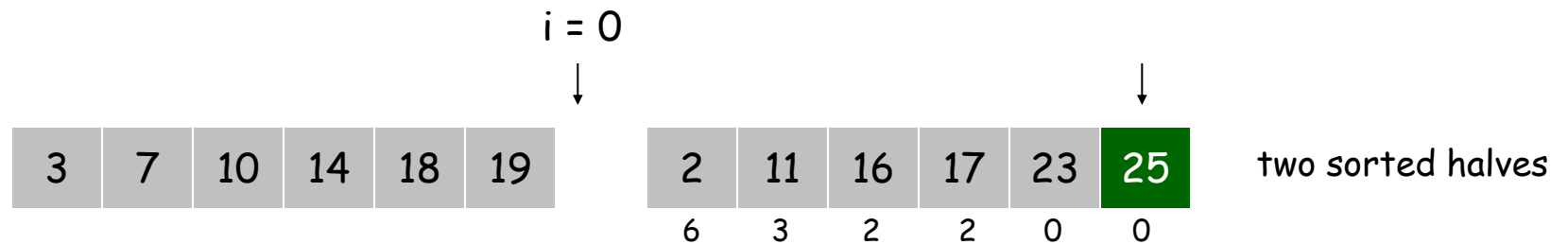
- Given two **sorted** halves, count number of inversions where a_i and a_j are in different halves.



Total: $6 + 3 + 2 + 2 + 0$

Inversions between two lists

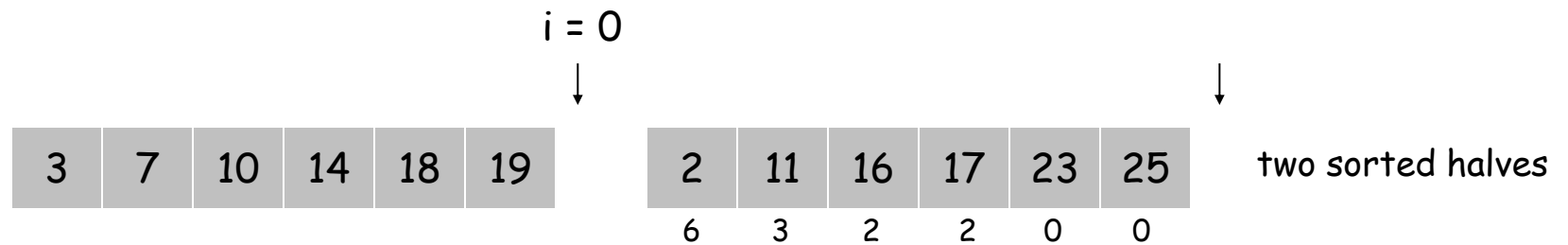
- Given two **sorted** halves, count number of inversions where a_i and a_j are in different halves.



Total: $6 + 3 + 2 + 2 + 0 + 0$

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Total: $6 + 3 + 2 + 2 + 0 + 0 = 13$