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Binary Search:
As an algorithm has a best case of O(1). This occurs when the the item you are looking for is in the center of the array or the “root node”. When you call the search and the place you call your search is the correct key you are looking for.

The algorithm in its worst case has a O(log BASE 2 (n)) time complexity this is because every time you are going another step down the tree you break the tree in half until you find your final piece.

Given that this is just a search algorithm there are no swaps only compares to check to recurse down the left and right tree node (divide the array in half right vs left)