linear Search! OCh! finstocc = × 2 Jow-0 high= 8 mid = 4 10w =0 high = 3 mid= 1 low = 2 high = 1 [1, 3, 5, 5, 5, 5, 5] 67, [27, 125] last Oce = 45 highed Low-e mid = 4 low = 5 high = 8 high = 5 low-5 m'd= 5 10W= .6, high=5 N=30 Monotonically increasing [1,2,3,4,5,1-----N]search stacehigh = 30 lo ω = 1 nes ~ res 530. low =1 high= 19 low =1 high = 6  $\int_{0}^{\infty} du = 4$   $\int_{0}^{\infty} du = 5$   $\int_{0}^{\infty} du = 5$ TC: O(log N).  $\int_{0}^{\infty} \int_{0}^{\infty} \int_{0$ N=30 [5.0, 5.1, 5.2 - --1, 5.9]low=0 mid=9(5+4) (5+ mid [5,40,5,41 ---, 5,49] Lov=0 high = 9 5,4+ 4 Tx + mid TC: 0 (209 n + P) [1, 2,3,5,6,7,8,9,10] (1, 3 grotations 2, 3 n 5 6 2 8 (5, 6, 7, 8, 9, 10, 1, 2, 3) high = 8 10W-0 D'is could the left half low = 5 high = 8 mid = 6 Discard the left half LOW=7 high=8 md=7 low < high mid 1) If the left half is sourted: -) if an [Jaw] < to && tor 7, an [mid] -) Discard the right half -) Otherwise, discard the left half -) if two) arritand electric [MSh] 37, 2) Otherwise: -) ton 7, our [md) el tou & our [high]. -) Discord the lett halt -) Otherwise discord the rish half. [5,6,7,8,9,10,1,2,3] 9105 = 5 2 [5, 6, 7, 8, 9, 10] nes-es

[3, 5, 2, 1, 7, 10, 9-ms]. targut=9

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