divide and conquer, compare the middle elements of two arrays, and recurse. $O(\log(n+m))$.

in general, finding the t-th largest element in the union of k sorted array with respective sizes $n_1, \ldots, n_k$ takes time $O(k + \sum_{i=1}^{k} \log n_i)$ [1].
https://cstheory.stackexchange.com/questions/20944/select-in-union-of-sorted-arrays-already-known/20955#20955.

References

[1] Greg N Frederickson and Donald B Johnson. Generalized selection and ranking: sorted matrices. *SIAM Journal on computing*, 13(1):14–30, 1984.