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Programming Assignment One

My algorithm uses merge sort to sort anytime $n \leq 50$. This was determined empirically on the hydra machine by timing sort select versus median of medians linear select for various inputs. The overhead of median of medians is greater than that of just sorting the array and finding the k th element up to array sizes of about 50. I chose $r = 5$. I tried other r 's and the run time didn't change much. For the subarrays of size 5, I used insertion sort. Since insertion sort did not make any recursive calls, this was faster than using merge sort for subarrays of size 5.