Please Grade This : (This is the updated one)

2. RANDOMIZED QUICKSORT

RANDOM generator is called whenever Randomized-Partition
is called so I can find number of calls made to
RANDOM generator by counting number of calls made to
Randomized - Partition.

In the best case, pivots are always the median of sequence.
Thus, each subsequence has size $\leq \frac{n}{2}$.
Randomized-Partition is called once for each subsequence.
RANDOM generator has $2T(n/2)$ so best case has $\Theta(n)$

In the worst case, pivots are the smallest/largest of sequence
Thus, each subsequence has size $n-1$
Randomized-Partition is called once for each subsequence
RANDOM generator has $T(n-1)$ so worst case has $\Theta(n)$.