Minimum retriving.

Estimated time to solve: 20 min

Actual solving time: 30 min

Best case: the minimum element is the first one A[0] so the algorithm will never need to update min

Average case: as all numbers are different it should take half of the iteration so n/2 ( prob = ½)

Worst case: the list is in descending order so min will need to be update n-1 times.

In a more explicit way and condensed into a formula:

Consider H1 = 1 (harmonic function)

Hn = ( Hn-1 + 1)\*1/n + Hn-1\*(1 -1/n)

Hn=Hn-1 + 1/n

Every permutation of n numbers consists of a permutation of n -1 number, the new smallest number being inserted at the beginning or affter the n-1 existing values so it has the probability of 1/n.

On the other hand if we consider the left-to-right minimima formula the average answer is that Hn-1 is aprox ln(n). which represents the average.