

function	Extra large	large	medium	small	tiny
insert	5.088803798 s	31.772956 ms	551.17 $\mu$ s	92.41 $\mu$ s	96.438 $\mu$ s
append	7.778833 ms	1.276404 ms	293.56 $\mu$ s	556.427 $\mu$ s	96.438 $\mu$ s

Insert is an  $O(n)$  operation as it requires all elements at or after the insert position to be shifted up by one. append, on the other hand, is generally  $O(1)$  and  $O(n)$  in the worst case, when more space must be allocated). This explains the substantial time difference.