10-1. *Comparisons among lists*

For each of the four types of lists in the following table, what is the asymptotic worst-case running rime for each dynamic-set operation listed?

	unsorted, singly linked	sorted, singly linked	unsorted, doubly linked	sorted, doubly linked
SEARCH(L, k)				
INSERT(L, x)				
DELETE(L, x)				
SUCCESSOR(L, x)				
PREDECESSOR(L, x)				
MINIMUM(L)				
MAXIMUM(L)				

Solution.

	unsorted, singly linked	sorted, singly linked	unsorted, doubly linked	sorted, doubly linked
SEARCH(L, k)	$O(n)$	$O(n)$	$O(n)$	$O(n)$
INSERT(L, x)	$O(1)$	$O(n)$	$O(1)$	$O(n)$
DELETE(L, x)	$O(n)$	$O(n)$	$O(1)$	$O(1)$
SUCCESSOR(L, x)	$O(n)$	$O(1)$	$O(n)$	$O(1)$
PREDECESSOR(L, x)	$O(n)$	$O(n)$	$O(n)$	$O(1)$
MINIMUM(L)	$O(n)$	$O(1)$ or $O(n)$	$O(n)$	$O(1)$
MAXIMUM(L)	$O(n)$	$O(n)$ or $O(1)$	$O(n)$	$O(1)$