

Langara College

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Course Title CPSC 1160

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### Time Complexity analysis

Linked Queue ADT insert function

$T(n) : O(1)$

Constant time complexity since there is no traversing.

Linked Queue ADT remove function

$T(n) : O(1)$

Constant time complexity since there is no traversing.

Linked Priority Queue ADT insert function

$T(n) : O(n)$

Moving from node to node by the order of  $n$  we go sorting the queue based on priority.

Linked Priority Queue ADT remove function

$T(n) : O(1)$

Constant time complexity since there is no traversing.