R-5.5

Algorithm InsertBefore(p, e):
 Create a new node v
 v.setElement(e)
 v.setPrev(p.getPrev())   {link v to its predecessor}
 v.setNext(p)   {link v to its successor}
 (p.getPrev()).setNext(v)   {link p's old predecessor to v}
 p.setPrev(v)   {link p to its new predecessor, v}
 $numElts{+}{+}$
 return v {the position for the element e}
Algorithm InsertFirst(e):
 Create a new node v
 v.setElement(e)
 $header$.getNext().setPrev(v)
 v.setNext($header$.getNext())
 $header$.setNext()v
 $numElts{+}{+}$
 return v
Algorithm InsertLast(e):
 Create a new node v
 v.setElement(e)
 $trailer$.getPrev().setNext(v)
 v.setPrev($trailer$.getPrev())
 $trailer$.setPrev(v)
 $numElts{+}{+}$
 return v