Unit 5: Linked Lists

Outline:

- Linked Lists structure
- Linked Lists Tasks
  - T1: Create an empty list
  - T2: Create a new node
  - T3: Add a new node to front of list (given newNode)
  - T4: Traverse the list (and output)
  - T5: Find the last node (of a non-empty list)
  - T6: Find the node containing a certain value
  - T7: Find a node AND it's previous neighbor.
  - T8: Append to the end of a non-empty list
  - T9: Delete the first node
  - T10: Delete an element, given p and n
  - T11: Insert a new element, given p and n
- Linked List Operations (NumberList class)
  - Create an empty list
  - Append to end of list
  - Insert within the list
  - Traverse the list (display)
  - Delete an item from the list
  - Destroy (deallocate) the list
- Linked Lists versus Arrays

References:

- Gaddis: Chapter 17, sections 1 and 2.

Practice Problems:

- Gaddis, Chapter 17, Programming Challenges:
  1 Your Own Linked List
  2 List Print
  5 List Search. If x is not found on the list, the search should return -1 (not 21!).
  15 pop and push member functions
  (add to front, add to end, remove from front, remove from end)