Linked List

- sparse polynomial w/ dense index array (Subsec 4.4.1)

\[ x^3 + 2x^2 + 5 \]

- remove \( x^2 \)?

- insert \( x^3 \)?

(Sec 4.1)

* if "no moving" but still want to access sequentially?

<table>
<thead>
<tr>
<th>Location</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>none</td>
</tr>
</tbody>
</table>

- add a "next" field

Graphically:

1. Originally: \( (0.5) \rightarrow (2.2) \rightarrow (3.1) \rightarrow (4.1) \)
2. After insertion:
   - Step 1: \( (4.1) \rightarrow (2.2) \rightarrow (0.5) \)
   - Step 2: \( (2.2) \rightarrow \) location of \( (4.1) \)

Singly linked list (chain)

* how about deletion?

1. \( (3.1) \rightarrow (2.2) \rightarrow (0.5) \rightarrow \) none

2. \( (2.2) \rightarrow \) location of \( (4.1) \)

1. \( (2.1) \), next = \( (2.2) \), next

2. free (2.2)