The Queue ADT

FIFO - First in, First out

- **ENQUEUE** (queue, v)
  - add an element with value v to the **rear** of the queue.
- **v = DEQUEUE** (queue)
  - remove the foremost element (the oldest element not already dequeued) and return its value.

Front (aka head)                      Rear (aka tail)

- Like **POP** on an empty stack, **DEQUEUE** on an empty queue has an undefined value.
Queues as Lists

Given a Queue Q and a List L

- \textbf{ENQUEUE (Q, v)} \iff \text{INSERT (v, \text{LAST (L)}, L)}

- \text{v = DEQUEUE (Q)} \iff \text{v = FINDKTH (0); DELETE (v,L)}