

**Exercise 6**

- a) Design a graph representation for queues. Describe informally the node types, edge types, and topology of the queue graphs. Give examples: empty queue, queue of length 1, queue of length  $> 1$ .
- b) Define graph tests, graph rewrite rules, and transactions operating on queues. Queues should offer the following operations:
  - `newqueue`: creates a new, i.e., empty queue
  - `isempty`: checks whether the queue is empty
  - `enqueue`: adds a number to the tail of the queue
  - `dequeue`: removes a number from the head of the queue
  - `head`: returns the number at the head of the queue (i.e., the next number to be dequeued)
  - `tail`: returns the number at the tail of the queue (i.e., the last number which was enqueued)