## Reasoning Table for goToTheRear

Use: T. Init(x) as a predicate to state that variable x has initial value for its type T

```
void goToTheRear(QueueOfT& q);
//! updates q
//! requires    |q| > 0
//! ensures    q = #q[1,|#q|) * #q[0,1)
```

State	Code	Assume	Confirm
0		A0	<u>C0</u>
	Т у;	///////////////////////////////////////	///////////////////////////////////////
1		A1	<u>C1</u>
	q.dequeue(y);		
2		A2	C2
	q.enqueue(y);		
3		A3	<u>C3</u>

## To do:

- 1. Fill in the reasoning table for goToTheRear do (1) substitutions for self and (2) formal parameter, and (3) also attached state #s
- 2. Write down VCs for each state, name them VC0, VC1, VC2, VC3
- 3. Prove the VC3