**c** function: 1 to add.

3k to resize (if k >0. Note: k is the size of the “completely filled array”)

**ĉ** function: 7 to add. (customer is willing to pay for add)

0 to resize (customer do not want to pay for resizing. It is not his/her concern)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item #** | **Operation** | **Cost for us** | **Customer paid** | **Profit** | **Balance** |
| 1 | Add | We assume we start with 1 slot. We add 1 item at the cost of 1. | 7 | 6 | 6 |
| 2 | Add | 3 to resize  (We have two slots)  1 to add | 7 | 6 | 3  9 |
| 3 | Add | 6 to resize  (We have 4 slots)  1 to add | 7 | 6 | 3  9 |
| 4 | Add | 1 to add | 7 | 6 | 15 |
| 5 | Add | 12 to resize  (We have 8 slots)  1 to add | 7 | 6 | 3  9 |
| 6 | Add | 1 to add | 7 | 6 | 15 |