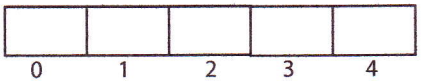
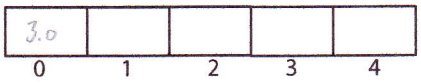
## Dynamic Array

1. Fill in the diagrams showing the cnt, cap, beg, and underlying data array after the following commands are carried out on a Dynamic Array Deque. The code for the arrDeque implementation that we discussed in class is included at the end of the exam if you need it. To receive partial credit, you should show the state of the data structure after each numbered line of code is executed. We have completed step 1 for you. (9 pts)

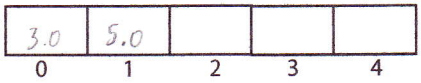
```
   struct dynArrDeque  d;
1)  initDynArrDeque(&d, 5);
2)  addBackArrDeque(&d, 3.0);
3)  addBackArrDeque(&d, 5.0);
4)  addBackArrDeque(&d, 1.0);
5)  removeFrontArrDeque(&d);
6)  addBackArrDeque(&d, 2.0);
7)  addFrontArrDeque(&d, 10.0);
8)  removeBackArrDeque(&d);
9)  removeFront(ArrDeque &d);
```

1 

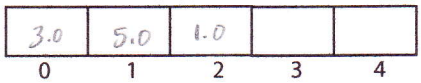
cap = 5 cnt = 0 beg= 0

2 

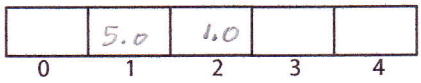
cap = 5 cnt = 1 beg= 0

3 

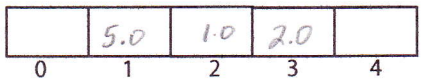
cap = 5 cnt = 2 beg= 0

4 

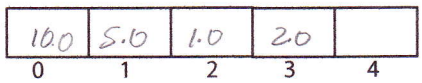
cap = 5 cnt = 3 beg= ∅

5 

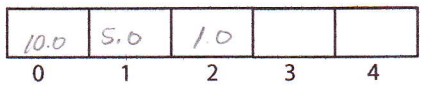
cap = 5 cnt = 2 beg= 1

6 

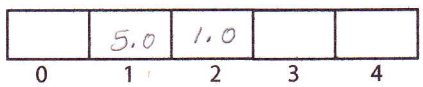
cap = 5 cnt = 3 beg= 1

7 

cap = 5 cnt = 4 beg= 0

8 

cap = 5 cnt = 3 beg= 0

9 

cap = 5 cnt = 2 beg= 1