Answer the following questions with respect to runtime. Also, think about when certain cases happen

1. Given an unsorted array, what is the cost of the following operations? Include resizing cost in your analysis and use the big O notation. The size of the current array is N

Operation	Best case	Worst case
insert at the end		
insert at the median location		
find if a given value exists in the array		
print out the entire array		

2. Given a singly linked list, what is the cost of the following operations? Assume that you have the size of the list as an instance variable. The size of the current linked list is N.

Operation	Best case	Worst case
insert at the end		
insert at the median location		
find if a given value exists in the array using get		
find if a given value exists in the array using an iterator		

3. We implement a stack using an array. The current size of the stack is N.

Operation	Best case	Worst case
Push into the stack if element 0 in the array is the top of the stack		
Pop from the stack if element 0 in the array is the top of the stack		
Peek from the stack if element 0 in the array is the top of the stack		
Push into the stack if element N-1 in the array is the top of the stack		
Pop from the stack if element N-1 in the array is the top of the stack		
Peek from the stack if element N-1 in the array is the top of the stack		

4. We implement a queue using a singly linked list. The current size of the queue is N and it can expand to be bigger. Assume that the front of the queue is the first element in the list and the end is the last element in the list.

Operation	Best case	Worst case
enqueue		
dequeue		