Linked list problem set

1. Print the size of a linked list.

Input	Output
34->12->55->42->11	5

2. Given the head of a linked list, print the value of the middle node.

Input	Output
34->12->55->42->11	55
12->8->65->10	8

3. Print the number of occurrences of a given number in a linked list.

Input	Output
1->2->1->2->1->3->1, num = 1	4

4. Given a sorted linked list, insert a number so that after insertion, it remains sorted.

Input	Output
1->4->6->7->9->11, num = 3	1->3->4->6->7->9->11

5. Delete all the even numbers from a linked list.

Input	Output
1->4->6->7->9->11	1->7->9->11

6. Reverse a doubly linked list.

Input	Output
7<->12<->8<->65<->10	10<->65<->8<->12<->7

7. Reverse a singly linked list.

Input	Output
7->12->8->65->10	10->65->8->12->7

8. Given a singly linked list and an integer k, rotate the linked list to the left by k places.

Input	Output
10->20->30->40->50, k = 4	50->10->20->30->40

9. Given a singly linked list, print "YES" if it is a palindrome otherwise print "NO".

Input	Output
1->2->2->1	YES
1->2->3->1	NO

10. Given the head of a linked list, determine if the linked list has a cycle in it.

Input	Output

3->2->0->4
   | |
   1<-6
	Yes

3->2->0->4->NULL	NO