

## LINKED LISTS - SET 3 QUESTIONS

### Question 1:

- ❖ **Problem link:**  
<https://practice.geeksforgeeks.org/problems/count-pairs-whose-sum-is-equal-to-x/1>
- ❖ **Difficulty level:** Easy
- ❖ **Expected Complexity:**
  - Time:  $O(M+N)$
  - Extra space:  $O(M+N)$

### Question 2:

- ❖ **Problem link:** <https://leetcode.com/problems/middle-of-the-linked-list/>
- ❖ **Difficulty level:** Easy
- ❖ **Expected Complexity:**
  - Time:  $O(N)$
  - Extra space:  $O(1)$

### Question 3:

- ❖ **Problem link:**  
<https://practice.geeksforgeeks.org/problems/add-1-to-a-number-represented-as-linked-list/1>
- ❖ **Difficulty level:** Easy
- ❖ **Expected Complexity:**
  - Time:  $O(N)$
  - Extra space:  $O(1)$

### Question 4:

- ❖ Problem link: <https://leetcode.com/problems/partition-list/>
- ❖ Difficulty level: Medium
- ❖ Expected Complexity:
  - Time:  $O(n)$
  - Extra space:  $O(1)$

### Question 5:

- ❖ Problem link: <https://leetcode.com/problems/linked-list-cycle-ii/>
- ❖ Difficulty level: Medium
- ❖ Expected Complexity:
  - Time:  $O(n)$
  - Extra space:  $O(1)$

### Question 6:

- ❖ Problem link: <https://leetcode.com/problems/add-two-numbers-ii/>
- ❖ Difficulty level: Medium
- ❖ Expected Complexity:
  - Time:  $O(m+n)$
  - Extra space:  $O(\max(m,n))$

### Question 7:

- ❖ **Problem link:** <https://leetcode.com/problems/split-linked-list-in-parts/>
- ❖ **Difficulty level:** Medium
- ❖ **Expected Complexity:**
  - Time:  $O(n+k)$
  - Extra space:  $O(k)$

### Question 8:

- ❖ **Problem link:**  
<https://practice.geeksforgeeks.org/problems/length-of-longest-palindrome-in-linked-list/1>
- ❖ **Difficulty level:** Hard
- ❖ **Expected Complexity:**
  - Time:  $O(n^2)$
  - Extra space:  $O(1)$

### Question 9:

- ❖ **Problem link:** <https://practice.geeksforgeeks.org/problems/sort-a-linked-list/1>
- ❖ **Difficulty level:** Hard
- ❖ **Expected Complexity:**
  - Time:  $O(N \log N)$
  - Extra space:  $O(\log N)$

Note: The solutions of all these questions will be provided on 5th June, 2021