Date	Name of Question	Type	No.Leetcode	Complexity	
1/20 & 7/1	Remove Duplicates from Sorted Array	Array	26	Easy	
1/20 & 7/1	Remove Duplicates from Sorted Array II	Array	80	Medium	
1/20	Search in Rotated Sorted Array	Array	33	Medium	
1/20	Search in Rotated Sorted Array II	Array	81	Medium	
1/21	Median of Two Sorted Array	Array	4	Hard	
1/27 & 7/2	Longest Consecutive Sequence	Array	128	Medium	建立unordered_map<int,bool> 查有否求一遍 O(n). 找到就标记true
1/27 & 7/1	Two Sum	Array	1	Easy	建立Hash 存所在位置! O(n) --> table[value] = index ‖ Better: using iter and table without creating vector
1/27	3Sum	Array	15	Medium	先排序 左右夹逼 跳过重复数 O(n^2)
2/2	3Sum Closest	Array	16	Medium	排序 左右夹逼
2/2	Remove Element	Array	27	Easy	index ++ = i
2/2	Valid Parentheses	Stack	20	Easy	
2/4	Word Ladder	BFS	127	Hard	From the first node, push each node that only has one different char with the previous one. And you could transfer vector to unordered_set or set, which could simplify the processes.
2/4 & 6/23	Binary Tree Level Order Traversal	BFS	102	Medium	一层一个vector. 读取size of q
2/4	Convert Binary Number in a Linked List to Integer	N/A	1290	Easy	
2/6 & 7/5	Add Two Numbers	Link-list	2	Medium	Using a carry = sum/10 and a new list to store the result
2/6 & 7/5	Longest Substring Without Repeating Characters	2Pointer	3	Medium	双指针, 长度 = i - start + 1, start 指针负责消
2/6	Longest Palindromic Substring	2Pointer	5	Medium	双指针, 辅助方程左右找相同, 考虑到oddEven情况 O(n^3) DP 更高效 O(n^2) i from n-1 to 0, j from i+1 to n
2/6	ZigZag Conversion		6		
2/6	Reverse Integer	Math	7	Easy	First set result type as long and return as int, result = result*10 + x%10, x /=10.
2/6	String to Integer (atoi)	Math	8	Medium	需要考虑所有情况. 去掉空格. 考虑符号. 考虑边界
2/6	Palindrome Number	Math	9	Easy	设置tmp求存passing input 可以加速
2/7	Container With Most Water	2Pointer	11	Medium	左右夹逼
2/7	Integer to Roman		12	Medium	2^Array
2/7	Roman to Integer		13	Easy	HashMap
2/7	Longest Common Prefix		14	Easy	
2/7	Letter Combinations of a Phone Number	BFS	17	Medium	从空到长度一致
2/7	4Sum	2Pointer	18	Medium	Recursive in case of time exceed
2/7	Remove Nth Node From End of List	Linked List	19	Medium	快慢指针. 快指针走到i+1
2/8	Merge Two Sorted Lists	Linked List	21	Easy	可以用recursive
2/8	Generate Parentheses	Recursive	22	Medium	Backtrace
2/8	Swap Nodes in Pairs	Linked List	24	Medium	Create a empty node and points to the head
2/8	Implement strStr()	2Pointer ?	28	Easy	
2/9	Divide Two Integers		29		
2/10	Next Permutation		31	Medium	Swap and reverse
2/10	Find First and Last Position of Element in Sorted Array	Binary Search	34	Medium	Using twice
2/10	Search Insert Position	Binary Search	35	Easy	
2/10	Valid Sudoku		36	Medium	3 Conditions and using for loop
~~2/10~~	~~Count and Say~~		~~38~~	~~Easy~~	
2/15	Combination Sum	Recusion	39	Medium	先排序
2/13	Find Lucky Integer in an Array	2Pointer	1394	Easy	
2/13	Longest Palindrome		409	Easy	[52]
2/13	Number of Islands	BFS	200	Medium	
2/15	Combination Sum II	Recusion	40	Medium	特定在问
2/15	First Missing Positive		41	Hard	替换
2/15	Multiply Strings		43	Medium	倒叙换个相乘. 个位%10. 十位/10
2/15	Permutations	DFS	46	Medium	swap and swap back
2/17	Permutations II	DFS	47	Medium	only swap once
2/17 & 7/1	Rotate Image		48	Medium	用swap, 先对角线翻转后水平翻转
2/17	Group Anagrams	Hash	49	Medium	考虑用质数作为index ‖ sort each words and create map table
2/24	Pow(x, n)		50	Medium	result = n > 0? result * x : result / x;
2/24 & 6/23	Maximum Subarray	DP	53	Easy	nums[i] += nums[i-1]
2/24	Spiral Matrix		54	Medium	while loop 四个方向接个转
2/24	Jump Game		55	Medium	从后往前, 要求array[i] > minlength
2/24	Merge Intervals		56	Medium	sort and create result array, push one and compare one
2/24	Insert Interval		57	Medium	同上
3/3	Length of Last Word		58	Easy	
3/3	Spiral Matrix II		59	Medium	四个边界
3/3	Rotate List	2Pointer	61	Medium	先走一遍node得到length. 涉及到k = k%n
3/3	Unique Paths	DP	62	Medium	
3/5	Longest Increasing Subsequence	DP	300	Medium	double for loop and use global variable to store the result.
3/5	Longest Common Subsequence	DP	1143	Medium	
3/5	Sqrt(x)	Binary Search	69	Easy	
3/5	Plus One		66	Easy	
3/5	Unique Paths II	DP	63	Medium	
3/5	Minimum Path Sum	DP	64	Medium	
3/13	Trim a Binary Search Tree	Binary Tree	669	Medium	delete the nodes that not inside of range
3/14	Add Binary		67	Easy	
3/14	Climbing Stairs	DP	70	Easy	
3/14	Simplify Path	Stack	71	Medium	weird and complex
3/26	Set Matrix Zeroes		73	Medium	先中间后第一排和第一列
3/26	Search a 2D Matrix		74	Medium	
3/26	Sort Colors		75	Medium	3 pointers && cur <= end
3/26	Combinations	Recursive	77	Medium	dfs from index to n
3/26	Subsets	Recursive	78	Medium	similar with Q77
3/26	Same Tree	Recursive	100	Easy	
3/28	Word Search	DFS	79	Medium	
3/28	Remove Duplicates from Sorted Array II	2pointer	80	Medium	
3/28	Search in Rotated Sorted Array II	binary search	81	Medium	
3/28	Remove Duplicates from Sorted List II		82	Medium	新建dummy node. return dummy.next (which is head). compare val of cur and cur->next
3/28	Remove Duplicates from Sorted List		83	Easy	
3/30	Longest Increasing Subsequence	DP	300	Medium	O(n^2) 两个for loop是一遍数列. 存最大数列的num DP更高效 O(nlogn)
3/30	Partition List	LinkList	86	Medium	创建两个list. 省界. 左list->右list
3/30	Merge Sorted Array		88	Easy	
3/30	Gray Code	二进制	89	Medium	
4/9	Subsets II	DFS/DP	90	Medium	多一个条件: i !=index && nums[i] == nums[i-1]
4/9	Decode Ways	DP	91	Medium	
4/9	Reverse Linked List II	Linked List	92	Medium	
4/9	Restore IP Addresses	DFS	93	Medium	必须要走到底才能退到是否valid
4/9	Validate Binary Search Tree	BST	98	Medium	
6/23 & 7/1	Triangle	DP	120	Medium	Triangle[i][j] = min(Triangle[i+1][j], Triangle[i+1][j+1])
6/23	Maximum Subarray	DP	53	Easy	
6/23	Binary Tree Level Order Traversal	BFS	102	Medium	
6/23	Binary Tree Zigzag Level Order Traversal	BFS	103	Medium	
6/23	Maximum Depth of Binary Tree	BFS	104	Easy	
6/24	Palindrome Partitioning II	DP	132	Hard	
6/24	Construct Binary Tree from Preorder and Inorder Traversal	Recurive	105	Medium	Using hash table
6/28	Construct Binary Tree from Inorder and Postorder Traversal	Recurive	106	Medium	Similar to the above, but using without hast_table
6/29	Max Consecutive Ones III	double pointer	1004	Medium	double pointer but should consider all conditions
6/29	Binary Tree Level Order Traversal II	BST	107	Medium	
6/29	Convert Sorted Array to Binary Search Tree	BST	108	Easy	
6/29	convert Sorted List to Binary Search Tree	Recurive	109	Medium	
6/29	Balanced Binary Tree	BST	110	Easy	
6/30	Lowest Common Ancestor of a Binary Tree	BST	236	Easy	考虑三种情况. 无. 都在. 只在一个
6/30	Minimum Depth of Binary Tree	BST	111	Easy	无leaf return max. 有 return min
6/30	Path Sum	BST	112	Easy	
6/30	Path Sum II	BST	113	Easy	Create helper function passing result,temp
6/30	Flatten Binary Tree to Linked List	BST	114	Medium	走一步变边->放到右边 then cur=cur->right
7/1	Populating Next Right Pointers in Each Node	BST/BFS	116	Medium	BFS(queue) or using two while loop
7/1	Populating Next Right Pointers in Each Node II	BFS	117	Medium	follow-up <need to review> https://www.youtube.com/watch?v=WZkmi9ZYaHE
7/1	Pascal's Triangle		118	Easy	Interesting
7/1	Pascal's Triangle II		119	Easy	
7/2	Best Time to Buy and Sell Stock		121	Easy	
7/2	Best Time to Buy and Sell Stock II	double pointer	122	Easy	类似双指针
7/2	Valid Palindrome	double pointer	125	Easy	
7/2	Sum Root to Leaf Numbers	DFS	129	Medium	
7/3	Surrounded Regions	BFS / DFS	130	Medium	都需要把边界筛选出来
7/3	Palindrome Partitioning	DP	131	Hard	回溯法 (递归)
7/3	Clone Graph	BFS	133	Medium	unordered_map<node*,node*>
7/3	Gas Station		134	Medium	int j = (i + cur) % n
7/3	Candy		135	Hard	count inc and dec O(n)
7/4	Single Number	Bit Manipulation	136	Easy	会慢运用 a^a = 0 starting from result = 0
7/4	Single Number II	Bit Manipulation	137	Medium	// Sort then comare i with i+2 https://www.youtube.com/watch?v=cOFAmaMBVps
7/4	Copy List with Random Pointer		138	Medium	
7/4	Word Break	DP	139	Medium	
7/5	Word Break II	DP	140	Hard	Check each element of wordDict -> compare length of s and sub_s
7/5	Reshape the Matrix		566	Easy	[i/c][i%c] = [i/m][i%m]
7/5	Linked List Cycle	double pointer	141	Easy	fast走两步 slow走一步
7/5	Linked List Cycle II	double pointer	142	Medium	fast走两步 slow走一步, 找到之后slow=head 再次找到slow=fast, return slow
7/5	Reorder List		143	Medium	
7/6	Binary Tree Preorder Traversal		144	Easy	
7/6	Binary Tree Postorder Traversal		145	Easy	
7/6	LRU Cache		146	Medium	Hash map & double link ?? Not sure about key changing

7/6	Insertion Sort List		147	Medium	
7/6	Sort List		148	Medium	slow and fast pointer to divide into two parts using merge sort
7/6	Kth Smallest Element in a Sorted Matrix		378	Medium	Could use priority_queue
7/7	Evaluate Reverse Polish Notation	Stack	150	Medium	using stack (O(n) & O(n)) --> using input vector as stack
7/7	Reverse Words in a String	Stack	151	Medium	Using stack to push each words
7/7	Maximum Product Subarray		152	Medium	DP but not using extra space
7/7	Find Minimum in Rotated Sorted Array	Binary Search	153	Medium	
7/7	Find Minimum in Rotated Sorted Array II	Binary Search	154	Hard	Similar to the 153 but adding one more situation: end --
~~7/7~~	~~Min Stack~~		~~155~~	~~Easy~~	~~stack<pair<int,int>>~~
7/8	Intersection of Two Linked Lists	Link_list	160	Easy	A+B and B+A
7/8	Find Peak Element		162	Medium	return any of the peaks.
7/8	Maximum Gap		164	Easy	Key thing is finding a method to sort.
7/8	Compare Version Numbers		165	Medium	
7/8	Longest Increasing Subsequence		300	Medium	倒序 O(MlogN)
7/9	Maximum Length of Repeated Subarray	DP	718		dp[n+1][m+1] O(M*N)
7/9	Longest Palindrome		409	Easy	Create a array[52] with a-z and A-Z return even or even + 1
7/9	Longest Palindromic Substring		5	Medium	从后往前 This situation is important: j-1 == 1 || table[i+1][j-1] in case of only 1 element
7/9	Longest Common Prefix		14	Easy	找前缀
7/10	Longest Common Subsequence		1143	Medium	DP[n+1][m+1] O(M*N) text1[i-1] == text2[j-1]
7/10	Longest Valid Parentheses		32	Hard	Stack for push -1 at first or DP DP[i] = DP[i-1] + DP[i- dp[i-1]-1]
7/11			639	Hard	
7/11	Unique Length-3 Palindromic Subsequences		1930	Medium	find the first and end shows position and calculate unique char in the arrange.
7/12	Painting a Grid With Three Different Colors	DP	1931	Hard	
7/12	Fraction to Recurring Decimal		166	Medium	Not good question
7/12	Isomorphic Strings		205	Easy	map<string,string>
7/12	Two Sum II - Input array is sorted	Double pointer	167	Easy	double pointer would be the easy way
7/12	Excel Sheet Column Title		168	Easy	return n == 0 ? "" : convertToTitle((n - 1) / 26) + (char) ((n - 1) % 26 + 'A');
7/12			169		