

# ■ Cyclic Sort Mastery Sheet

■ No	■ Problem Name	■ LeetCode #	■ Concept	■ Key Idea
1	Missing Number	#268	Numbers in range 0..n, one missing	Find missing index after sorting or sum check
2	Find All Numbers Disappeared in an Array	#448	Range [1..n], some missing	Cyclic sort, collect indices where $nums[i] \neq i+1$
3	Find the Duplicate Number	#287	Range [1..n], one duplicate	Detect duplicate where correct index already occupied
4	Set Mismatch	#645	One duplicate + one missing	Cyclic sort → misplaced element pair gives both
5	First Missing Positive	#41	Range [1..n] but negatives, zeros present	Ignore invalid numbers, cyclic sort positives
6	Corrupt Pair / Error Number (Same as #645, reattempt)		Duplicate and missing number	Reinforces concept
7	Find All Duplicates in an Array	#442	Range [1..n], some repeated	Cyclic sort → find all duplicate indices
8	Find the Missing and Repeating Number (Variation of #645)		Both missing + repeating	Classic interview combo
9	Find Missing Numbers (Multiple) (Variation of #448)		Multiple missing	Same logic extended
10	Smallest Missing Positive (Revisit)	#41 again	Hard version of missing number	Core mastery test