216. Combination Sum III

Find all valid combinations of k numbers that sum up to n such that the following conditions are true:

- Only numbers 1 through 9 are used.
- Each number is used at most once.

Return a list of all possible valid combinations. The list must not contain the same combination twice, and the combinations may be returned in any order.

Example 1:

- **Input:** k = 3, n = 7
- **Output:** [[1,2,4]]
- **Explanation:**
  - 1 + 2 + 4 = 7
  - There are no other valid combinations.

Example 2:

- **Input:** k = 3, n = 9
- **Output:** [[1,2,6],[1,3,5],[2,3,4]]
- **Explanation:**
  - 1 + 2 + 6 = 9
  - 1 + 3 + 5 = 9
  - 2 + 3 + 4 = 9
  - There are no other valid combinations.

Example 3:

- **Input:** k = 4, n = 1
- **Output:** []
- **Explanation:**
  - There are no valid combinations.
  - Using 4 different numbers in the range [1,9], the smallest sum we can get is 1+2+3+4 = 10 and since 10 > 1, there are no valid combination.

Constraints:

- 2 <= k <= 9
- 1 <= n <= 60