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# 1. Rotate list to a given index
def rotate_list(lst, idx):
    return lst[idx:] + lst[:idx]

print(rotate_list(['a', 'b', 'c', 'd', 'e'], 2))

['c', 'd', 'e', 'a', 'b']
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# 2. Sort list by ignoring signs
def absolute_sort(lst):
    return sorted(lst, key=abs)

print(absolute_sort([9, -4, 2, 0, -2, 7, -3, 5, -5]))

[0, 2, -2, -3, -4, 5, -5, 7, 9]
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# 3. Shuffle words in a sentence
import random
def shuffle_sentence(sentence):
    words = sentence.split()
    random.shuffle(words)
    return " ".join(words)

print(shuffle_sentence("Python is fun to learn"))

to fun is Python learn
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# 4. Return LCM of two numbers
import math
def get_lcm(a, b):
    return abs(a * b) // math.gcd(a, b)

print(get_lcm(12, 18))

36
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# 5. Delete words with more than two vowels
def filter_vowels(words):
    vowels = "aeiouAEIOU"
    return [w for w in words if sum(1 for char in w if char in vowels) <= 2]

print(filter_vowels(['Book', 'mobile', 'queue']))

['Book']
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# 6. Check if number is dominated by even or odd
def check_dominance(num):
    s = str(num)
    evens = sum(1 for d in s if int(d) % 2 == 0)
    odds = len(s) - evens
    if evens > odds: return "dominated by even nums"
    elif odds > evens: return "dominated by odd nums"
    else: return "balanced"
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print(check_dominance(2234))
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dominated by even nums

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# 7. Convert column matrix to row matrix
col_matrix = [1, 2, 3, 4]
row_matrix = [[x] for x in col_matrix]
print(row_matrix)
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[[1], [2], [3], [4]]
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# 8. Calculate sum of primes in range
def sum_primes(start, end):
    total = 0
    for num in range(start, end + 1):
        if num > 1:
            for i in range(2, int(num**0.5) + 1):
                if num % i == 0: break
            else: total += num
    return total

print(sum_primes(1, 10))
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17

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# 9. Add elements of a tuple to a list
lst = [1, 2, 3]
tpl = (4, 5)
lst.extend(tpl)
print(lst)
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[1, 2, 3, 4, 5]
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# 10. Use math for factorial, gcd, and circle area
import math
print("Factorial:", math.factorial(5))
print("GCD:", math.gcd(12, 18))
print("Circle Area:", math.pi * (5**2))
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Factorial: 120
GCD: 6
Circle Area: 78.53981633974483
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