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class Node:
    def __init__(self, coefficient, exponent):
        self.coefficient = coefficient
        self.exponent = exponent
        self.next = None

class Polynomial:
    def __init__(self):
        self.head = None

    def insert(self, coefficient, exponent):
        new_node = Node(coefficient, exponent)
        if self.head is None:
            self.head = new_node
        else:
            current = self.head
            while current.next:
                current = current.next
            current.next = new_node

    def add(self, other_poly):
        result_poly = Polynomial()
        current1 = self.head
        current2 = other_poly.head

        while current1 or current2:
            if current1 and (not current2 or current1.exponent >
current2.exponent):
                result_poly.insert(current1.coefficient,
current1.exponent)
                current1 = current1.next
            elif current2 and (not current1 or current2.exponent >
current1.exponent):
                result_poly.insert(current2.coefficient,
current2.exponent)
                current2 = current2.next
            else:
                new_coefficient = current1.coefficient +
current2.coefficient
                if new_coefficient != 0:
                    result_poly.insert(new_coefficient,
current1.exponent)
                current1 = current1.next
                current2 = current2.next

        return result_poly

    def multiply(self, other_poly):
        result_poly = Polynomial()
        current1 = self.head

        while current1:
            current2 = other_poly.head
            while current2:

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        new_coefficient = current1.coefficient *
current2.coefficient
        new_exponent = current1.exponent + current2.exponent
        result_poly.insert(new_coefficient, new_exponent)
        current2 = current2.next
        current1 = current1.next

    return result_poly

def display(self):
    current = self.head
    while current:
        print(f"{current.coefficient}x^{current.exponent}", end="
")
        if current.next:
            print("+", end=" ")
        current = current.next
    print()

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