

Exercise 2

Complete the computations in Exercises 1 to 4.

$$3(133, -0.33, 0) + (-399, 0.99, 0) = (?, ?, ?)$$

Solution

Each pair of parentheses represents a vector, and commas separate the vector's components. Factors in front of parentheses are distributed to each component.

$$3(133, -0.33, 0) = (399, -0.99, 0)$$

In adding or subtracting vectors, the respective components are added or subtracted.

$$\begin{aligned} 3(133, -0.33, 0) + (-399, 0.99, 0) &= (399, -0.99, 0) + (-399, 0.99, 0) \\ &= (399 - 399, -0.99 + 0.99, 0 + 0) \\ &= (0, 0, 0) \end{aligned}$$