Exercise 1

Complete the computations in Exercises 1 to 4.

$$(-21, 23) - (?, 6) = (-25, ?)$$

Solution

Each pair of parentheses represents a vector, and commas separate the vector's components. In adding or subtracting vectors, the respective components are added or subtracted. And when one vector is equal to another, the respective components are equal.

$$(-21, 23) - (?, 6) = (-21-?, 23 - 6) = (-25, ?) \quad \Rightarrow \quad \begin{cases} -21-? = -25 \\ 23 - 6 = ? \end{cases}$$

Solving each equation for the question mark results in

$$(-21, 23) - (4, 6) = (-25, 17).$$