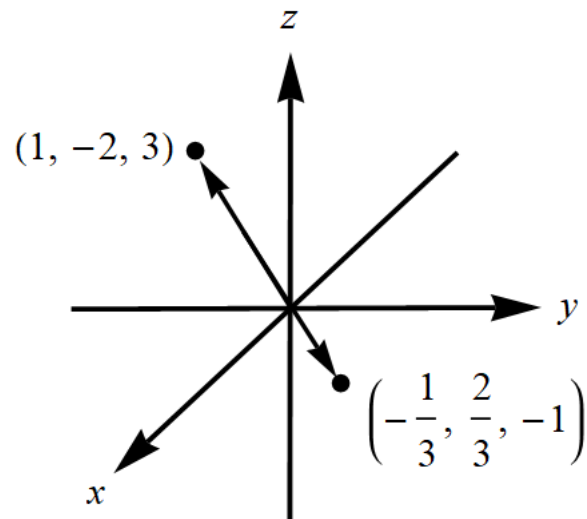


Exercise 10

Sketch $(1, -2, 3)$ and $(-\frac{1}{3}, \frac{2}{3}, -1)$. Why do these vectors point in opposite directions?

Solution

If the vector $(-\frac{1}{3}, \frac{2}{3}, -1)$ is multiplied by -3 , the vector $(1, -2, 3)$ is obtained. The minus sign makes the vector point in the opposite direction, and multiplying by 3 triples the vector's length.