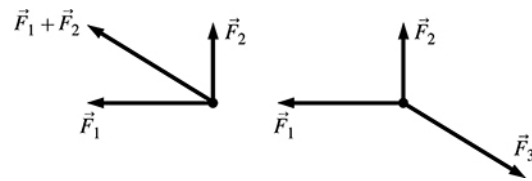


5.18. Visualize:



Solve: The object will be in equilibrium if \vec{F}_3 has the same magnitude as $\vec{F}_1 + \vec{F}_2$ but is in the opposite direction so that the sum of all the three forces is zero.