$$\vec{\mathbf{F}}_{\text{net}} = \vec{\mathbf{F}}_1 + \vec{\mathbf{F}}_2 = \left(2.0\hat{\mathbf{i}} + 4.0\hat{\mathbf{j}}\right) + \left(3.0\hat{\mathbf{i}} + 6.0\hat{\mathbf{j}}\right) = 5.0\hat{\mathbf{i}} + 10.0\hat{\mathbf{j}}\ \text{N}$$