

30. We apply Eq. 9-17, with $M = \sum m = 1.3$ kg,

$$\begin{aligned} M\vec{v}_{\text{com}} &= m_A\vec{v}_A + m_B\vec{v}_B + m_C\vec{v}_C \\ (1.3) \left(-0.40\hat{i} \right) &= (0.50)\vec{v}_A + (0.60) \left(0.20\hat{i} \right) + (0.20) \left(0.30\hat{i} \right) \end{aligned}$$

which leads to $\vec{v}_A = -1.4\hat{i}$ in SI units (m/s).