3.27. **Visualize:** Refer to Figure P3.27.

**Solve:** From the rules of trigonometry, we have \( A_x = 4 \cos 40^\circ = 3.1 \) and \( A_y = 4 \sin 40^\circ = 2.6 \). Also, \( B_x = -2 \cos 10^\circ = -1.97 \) and \( B_y = +2 \sin 10^\circ = 0.35 \). Since \( \vec{A} + \vec{B} + \vec{C} = \vec{0} \),

\[
\vec{C} = -\vec{A} - \vec{B} = (-\vec{A}) + (-\vec{B}) = (-3.1\hat{i} - 2.6\hat{j}) + (+1.97\hat{i} - 0.35\hat{j}) = -1.1\hat{i} - 3.0\hat{j}.
\]