



$$X_{A0} = -4.0 \text{ mi}$$

$$V_{A0} = 6.0 \text{ mi/hr}$$

$$X_{B0} = 3.0 \text{ mi}$$

$$V_{B0} = -5.0 \text{ mi/hr}$$

$t_A = t_B$ and $x_A = x_B$ (final positions are the same)

$$X_{A0} + V_A \cdot t_A = X_{B0} + V_B \cdot t_B$$

$$(-4.0 \text{ mi}) + (6.0 \text{ mi/hr})(t) = (3.0 \text{ mi}) + (-5.0 \text{ mi/hr})(t)$$

$$(11.0 \text{ mi/hr})t = (7.0 \text{ mi})$$

$$t = 7/11 \text{ hr}$$

$$x = X_{A0} + V_A \cdot t_A$$

$$= (-4.0 \text{ mi}) + (6.0 \text{ mi/hr})(7/11 \text{ hr})$$

$$x = -.18 \text{ mi}$$