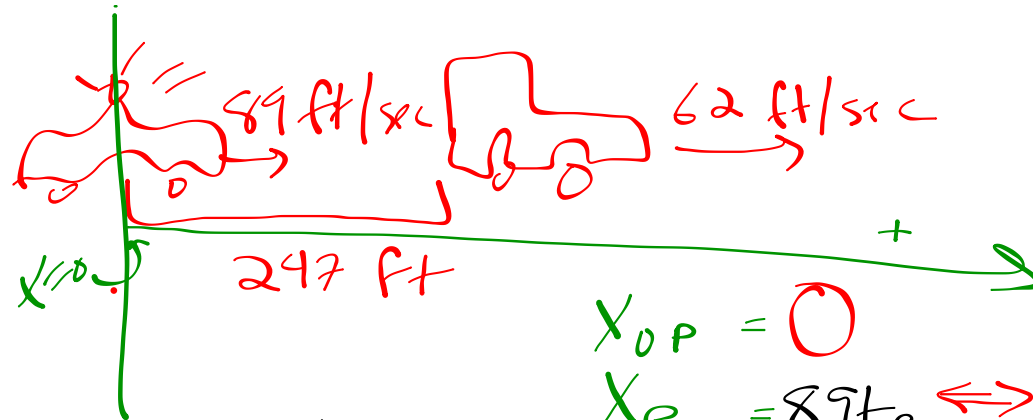


A car cruises steadily at 62.0 ft/sec. 247 feet behind, a patrol car cruises at 89.0 ft/sec. When and where will the patrol car overtake the other? [9.15 sec at 567 ft from the car's start]



$$X = X_0 + v_0 t + \frac{1}{2} a t^2$$

$$X = 89 t_p$$

$$X_{0p} = 0$$

$$X_p = 89 t_p$$

$$v_{0p} = 89$$

$$v_p = 89$$

$$a_p = 0$$

$$t_p =$$

$$X_{0c} = 247$$

$$X_c = 247 + 62 t_c$$

$$v_{0c} = 62$$

$$v_c = 62$$

$$a_c = 0$$

$$t_c =$$

$$X = X_0 + v_0 t + \frac{1}{2} a t^2$$

$$X = 247 + 62 t_c$$

$$89 t_x = 247 + 62 t_x$$