

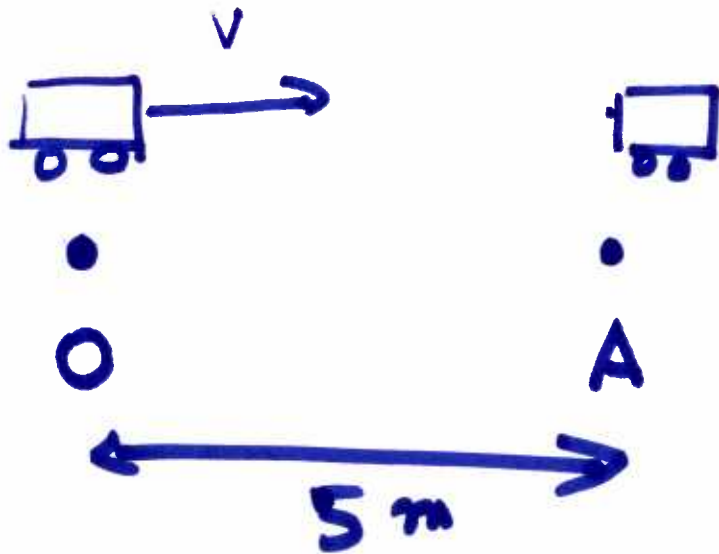
$$\underline{\underline{\Delta x}} \quad c \underline{\underline{\Delta t}}$$

$$x_2 - x_1 = 5 \text{ m}$$

$$t_2 - t_1 = 1 \times 10^{-8} \text{ s}$$

$$c(t_2 - t_1) = 3 \text{ m}$$

$$\Delta t' = \gamma \left(\Delta t - \frac{v \Delta x}{c^2} \right)$$

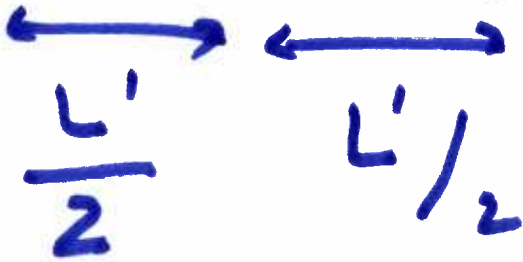
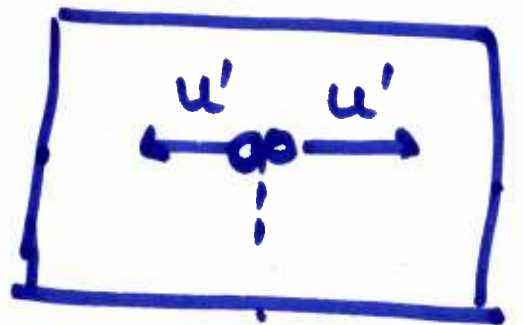


$$v = \frac{5\text{ m}}{1 \times 10^{-8}} \\ = 5 \times 10^8 \text{ m/s}$$

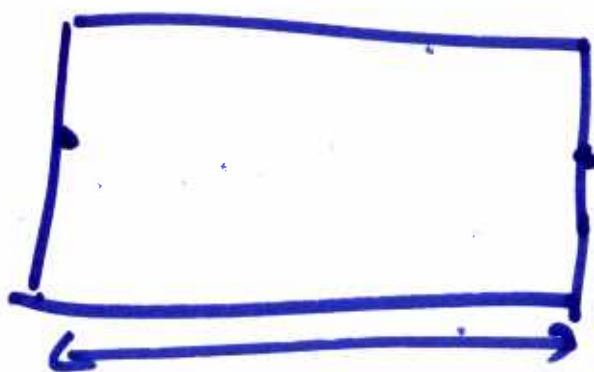
$$\Delta x = 5\text{ m} \\ \Delta t = 1 \times 10^{-8} \text{ s}$$

$$\Delta t = \frac{5 \text{ m}}{2 \times 10^8 \text{ m/s}}$$

$$\Delta t = 2.5 \times 10^{-8} \text{ s}$$



$$\Delta x' = L'$$



7

$$P_i = m \times 0.6C - m \times 0.6C$$
$$= 0$$

$$u_x = 0.6c$$

$$v = 0.6c$$

$$u_x' = \frac{u_x - v}{1 - \frac{u_x v}{c^2}}$$

$$u_x = 0.6c$$

$$v = 0.6c$$

$$u'_x = \frac{u_x - v}{1 - \frac{u_x v}{c^2}}$$