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Relative Speeds Addition

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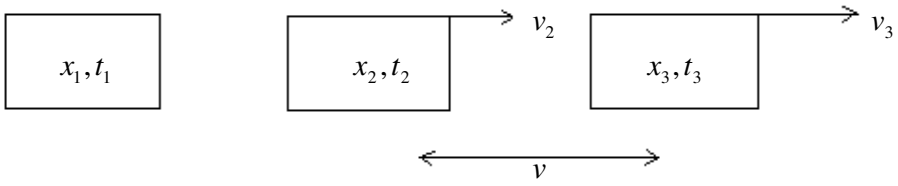
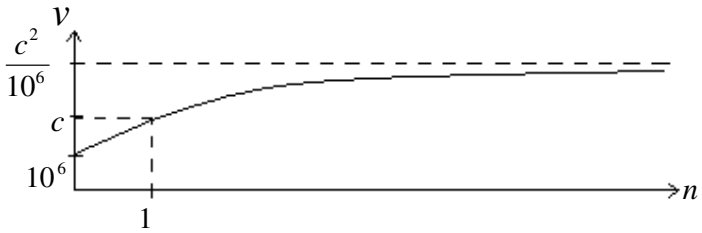


$$\begin{cases} x_2 = \dfrac{x_1 + v_2 t_1}{\sqrt{1 - v_2^{\,2}/c^2}} \\ t_2 = \dfrac{t_1 + v_2 x_1/c^2}{\sqrt{1 - v_2^{\,2}/c^2}} \\ x_3 = \dfrac{x_1 + v_3 t_1}{\sqrt{1 - v_3^{\,2}/c^2}} \\ t_3 = \dfrac{t_1 + v_3 x_1/c^2}{\sqrt{1 - v_3^{\,2}/c^2}} \\ x_3 = \dfrac{x_2 + v t_2}{\sqrt{1 - v^2/c^2}} \\ t_3 = \dfrac{t_2 + v x_2/c^2}{\sqrt{1 - v^2/c^2}} \end{cases} \quad \Leftrightarrow \quad v = c^2 \frac{v_3 - v_2}{c^2 - v_3 v_2}$$

For v_2 negative: $\quad v = c^2 \dfrac{v_3 + v_2}{c^2 + v_3 v_2} \quad$ and $\quad v_3 = 1 \times 10^6$

$$v = c \frac{10^6 + nc}{c + n10^6}$$



Relative speeds can be greater than light speed.

If $\quad v_3 = 0 \quad \Leftrightarrow \quad v \to \infty$