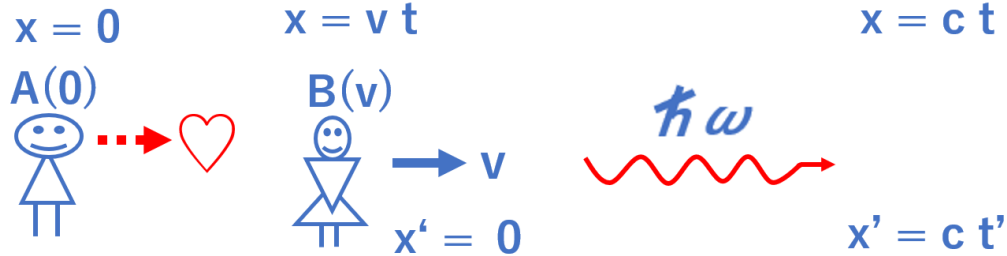


中学の数学で解ける特殊相対性理論

Case(1)



(10)

$$\begin{aligned} x' &= \beta (x - vt) \\ t' &= \beta (t - vx/c^2) \end{aligned}$$

For Case(1) and Case (2) event

(12)

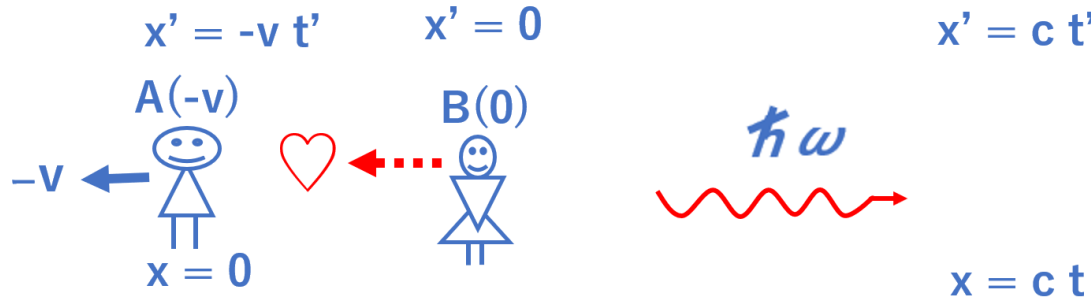
$$\begin{aligned} x &= \beta (x' + vt') \\ t &= \beta (t' + vx'/c^2) \end{aligned}$$

For Case(3) event only,
not valid for Case (1) and (2)

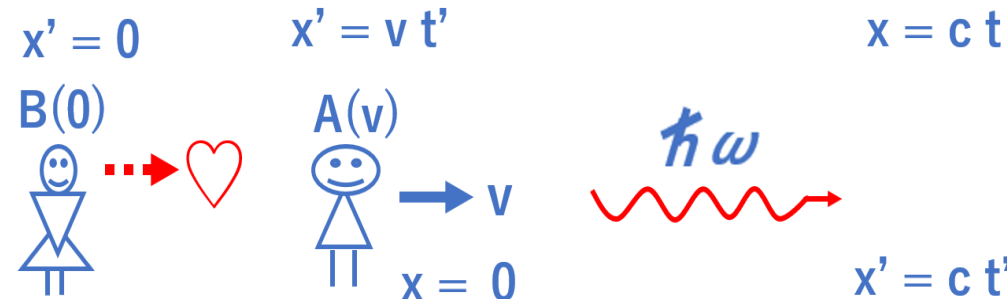
(11)

$$\begin{aligned} x' &= \beta (x + vt) \\ t' &= \beta (t + vx/c^2) \end{aligned}$$

Case(2)



Case(3)



(13)

$$\beta = \frac{1}{\sqrt{1 - v^2/c^2}}$$