twin paradox

moving twin stays younger: no contradiction because moving twin is not in a inertial frame

\[ \oint dt = \int \frac{ds}{c} \]
\[ t(a) \]

maximum for a clock at rest

2.7) Lorentz transformations

event \((x,y,z,\tau)\) in \(K\)

What are its coordinates in \(K'\)?

\[ \begin{pmatrix} x' \\ y' \\ z' \\ \tau' \end{pmatrix} \]

in \(cm\):  

\[ t' = t \]
\[ y' = y \]
\[ z' = z \]
\[ x' = x - vt \]

relativistic:  

\[ S^2 \text{ should be invariant} \]

\[ x_0 = ct \quad x'_0 = ct' \]
\[ x_1 = x \quad x'_1 = x' \]

then \( x_0^2 - x_1^2 = x'_0^2 - x'_1^2 \)