$$
\begin{aligned}
E_A &= \gamma_A mc^2 \\
E_B &= \gamma_B mc^2
\end{aligned}
$$

$$\frac{\gamma_A}{\gamma_B} =$$

$$\gamma_A = \gamma_B \; (\qquad\qquad)$$

$$t_A = \frac{D}{v_A}$$

$$\gamma = \frac{1}{\sqrt{1-\frac{v^2}{c^2}}} \qquad \rightarrow \qquad v = c\sqrt{1-\frac{1}{\gamma^2}}$$

$$
\begin{aligned}
t_A &= \frac{D}{c}\frac{1}{\sqrt{1-\frac{1}{\gamma^2}}} \\
&= t_0\frac{1}{\sqrt{1-\frac{1}{\gamma^2}}}
\end{aligned}
$$

$$t_A = t_0 + \frac{1}{2}\,t_0\,\frac{1}{\gamma_A^2}$$

$$t_B = t_0 + \frac{1}{2}\,t_0\,\frac{1}{\gamma_B^2}$$

$$t_B - t_A = \frac{1}{2}\,t_0\;(??-??)$$

$$
\begin{aligned}
t_B - t_A &= \frac{1}{2}\,t_0\;\left(\frac{1}{\gamma_B^2}(1-\frac{1}{1.73^2})\right) \\
&= \frac{1}{2}\,t_0\,(0.6648)\;\left(\frac{1}{\gamma_B^2}\right)
\end{aligned}
$$