12. (a) According solely to the principles of Special Relativity, yes. If the person moves fast enough, then the time dilation argument will allow for his proper travel time to be much less than that measured from the Earth. Stated differently, length contraction can make that travel distance seem much shorter to the traveler than to our Earth-based estimations. This does not include important considerations such as fuel requirements, stresses to the human body (due to the accelerations, primarily), and so on.

(b) Let $d = 23000\,\text{ly} = 23000\,c\,\text{y}$, which would give the distance in meters if we included a conversion factor for years $\to$ seconds. With $\Delta t_0 = 30\,\text{y}$ and $\Delta t = d/v$ (see Eq. 38-10), we wish to solve for v from Eq. 38-7. Our first step is as follows:

$$\begin{aligned}\Delta t &= \frac{\Delta t_0}{\sqrt{1-(v/c)^2}}\\ \frac{d}{v} &= \frac{\Delta t_0}{\sqrt{1-(v/c)^2}}\\ \frac{23000\,c\,\text{y}}{v} &= \frac{30\,\text{y}}{\sqrt{1-(v/c)^2}}\ ,\end{aligned}$$

at which point we can cancel the unit year and manipulate the equation to solve for the speed. After a couple of algebraic steps, we obtain

$$\begin{aligned}v &= \frac{c}{\sqrt{1+\left(\frac{30}{23000}\right)^2}}\\ &= \frac{299792458\,\text{m/s}}{\sqrt{1+0.000017013}}\\ &= 299792203\ \text{m/s}\end{aligned}$$

which may also be expressed as $v = 0.999\,999\,15c$. The discussion in Sample Problem 38-7 dealing with these sorts of values may prove helpful for those whose calculators do not yield this answer.