

[mex210] Interstellar travel

The distance from Earth to a star is 12 light-years. Their relative velocity is negligible.

- (a) How fast (in units of c) must a spaceship travel so that it reaches the star in 12 years according to the clocks on board?
- (b) How long will the trip take according to the clocks on Earth?
- (c) How many light-years is the distance between Earth and the star from the perspective of the cruising spaceship?

Solution: