

PHYS 3740 In Class Group Exercise

Name: _____ Date: _____

Twin paradox (David W. Hogg Problem 2-12)

Alpha Centauri is a distance of $\ell = 4.34$ light years (one light year is the distance light travels in one year) from the Earth. At what speed u must a 25-year-old astronaut travel there and back if he or she is to return before reaching age 65? By how much will the astronaut's siblings age over the same time?