

SPECIAL RELATIVITY CHALLENGE:

Two twins who are 19.0 years old leave Earth and travel to a distant planet 12.0 light-years away (you may assume that the planet and the Earth are at rest with respect to each other). The twins depart at the same Earth time in different space ships. One twin travels at $0.900c$, while the other travels at $0.500c$. According to the theory of relativity, what is the difference between their ages when they BOTH finally arrive on the new planet?