[nex84] Crossing a river

Four Chadian friends wish to cross the Chari river at night over a narrow and treacherous bridge. They have one flashlight. Gougouma, Ndakta, Maïtaïna, and Kaïssebo require 1, 2, 5, and 10 minutes, respectively, to walk across the bridge. The bridge supports not more than two persons simultaneously. The use of the flashlight is essential on every trip. The duration of each trip is dictated by the slower person. Find the shortest time in which the four friends can make it to the other side of the river. Describe the sequence of trips that minimizes the total time.

Solution: