**The Puzzle:**

Four people begin on the same side of a bridge. You must help them across to the other side. It is night. There is one flashlight. A maximum of two people can cross at a time. Any party who crosses, either one or two people, must have the flashlight to see. The flashlight must be walked back and forth, it cannot be thrown, etc. Each person walks at a different speed. A pair must walk together at the rate of the slower person’s pace, based on this information:

Person 1 takes t1 = 1 minutes to cross, and the other persons take t2 = 2 minutes, t3 = 5 minutes, and t4 = 10 minutes to cross, respectively. Find The minimum time to cross the bridge.

Try to solve the general case of the bridge-crossing puzzle.