

There are 4 men who want to cross a bridge. They all begin on the same side.

How fast can all of them across to the other side.

It is night. There is one flashlight.

A maximum of two people can cross at one time. Any party who crosses, either 1 or 2 people, must have the flashlight with them.

The flashlight must be walked back and forth, it cannot be thrown, etc.

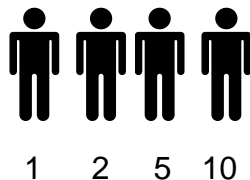
Each man walks at a different speed.

A pair must walk together at the rate of the slower mans pace.

Man 1: 1 minute to cross Man 2: 2 minutes to cross

Man 3: 5 minutes to cross Man 4: 10 minutes to cross

For example if Man 1 and Man 4 walk across first. 10 Minutes have elapsed when they get to the other side of the bridge. If Man 4 returns with the flashlight. A total of 20 minutes have passed.



There are two ways to get the men across in 17 minutes. First, the two fast guys (men 1 and 2) cross. One of them returns with the flashlight. (Either can return, leading to the two solutions.) Then the two slow guys (3 and 4) cross, and the remaining fast guy returns with the flashlight. Then the two fast guys cross again

The slow guys walk together so they don't hold back the fast guys, and the fast guys make more trips because they can.