

Pb.2

Solution

Use **Dynamic Programming** to solve the **minimum time** to cross the bridge.
"optimal substructure"

Given that

Bridge PQ

Person **A** = 1

Person **B** = 2

Person **C** = 5

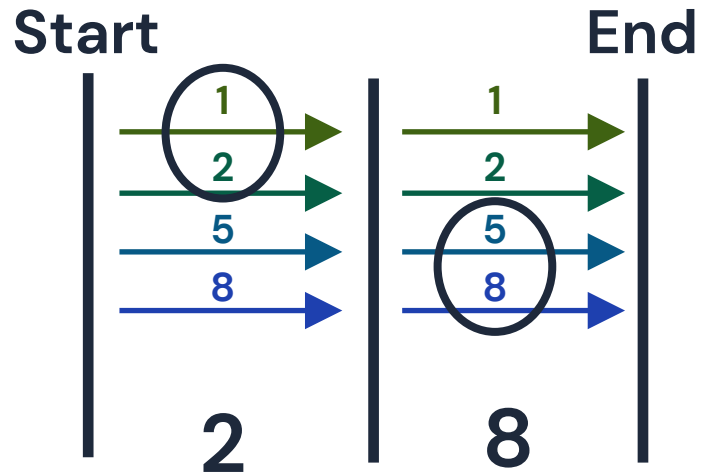
Person **D** = 8



4 persons must cross the bridge twice, 2 at a time

The minimum sum (*pairing*) would be $2+8 = 10$.

Draw an illustration. **Pick 2 lines per slot.**



Answer

Person A and Person B cross the bridge first, then Person C and Person D follow.