

Calculate the Banzhaf Power Index for each player in the following yes-no voting systems.

1. A country has four states S, T, U, and V. In the legislature, S has 10 representatives, T has 6 representatives, U has 4 representatives, and U has 2 representatives. It takes 13 votes to pass a motion. (Assume each state votes as a block – that is, the state T will either cast all 6 votes for or against the motion, etc.)
2. A company has five partners A, B, C, D, and E. Decisions are made by simple majority, but A and B each have veto power.