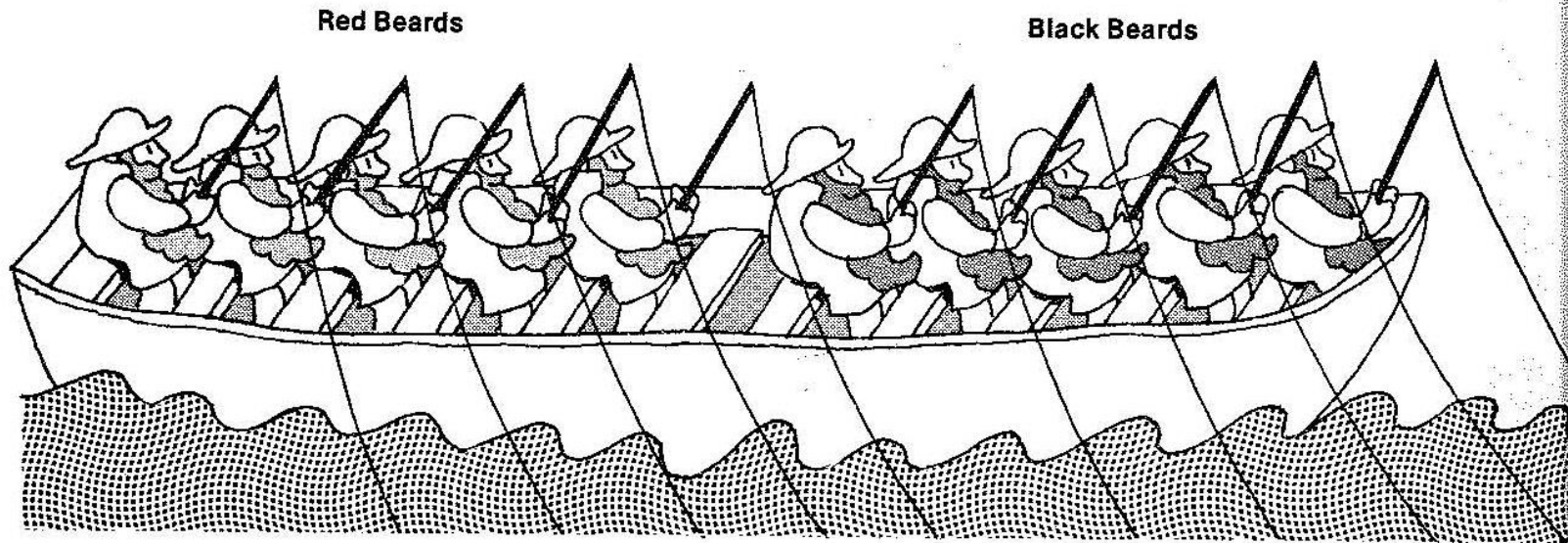


Ten Men in a Boat Part 2



All the fishermen in the stern have red beards and all the fishermen in the bow have black beards. The five men in the back of the boat decide that the fishing is better in the front, and the five in the front decide the fishing is better in back. They all agree to change places. To ensure that the boat will not capsize, they also agree to the following rule: *Any man can move to an empty seat next to him or climb over at most one man into an empty seat on the other side.* What is the minimum number of moves required for all the fishermen in the front of the boat to change places with those in the back?

Now that you have solved “Ten Men in a Boat Part 1,” your task is to develop a formula that will determine the minimum number of moves it will take for the men to swap sides if you are given any even number of men in a boat, starting with one empty seat in the middle.

Use the “boats” on the next page to facilitate your process.

