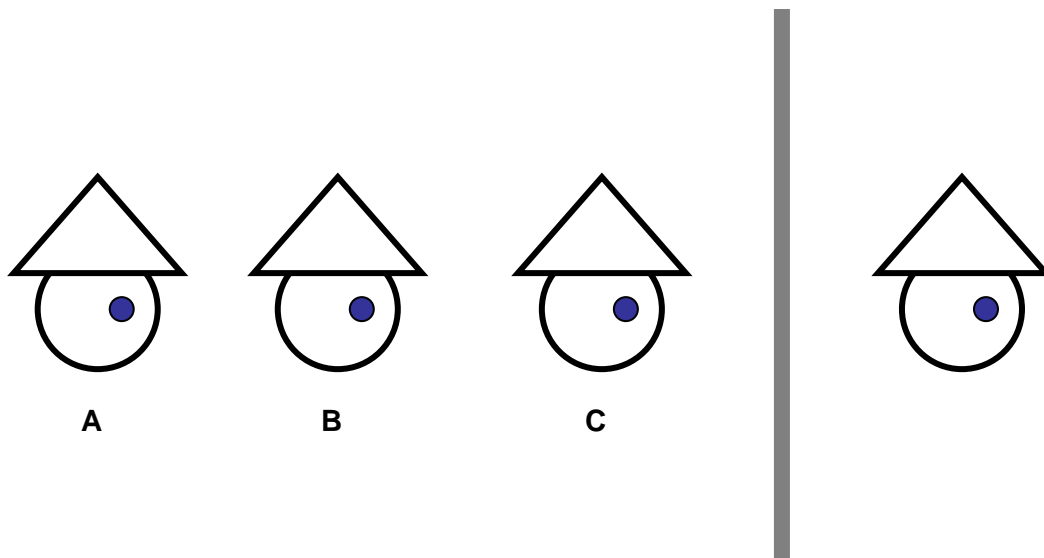


Prisoners and Hats Problem¹

Four prisoners are arrested for a crime, but the jail is full and the jailer has nowhere to put them. He eventually comes up with the solution of giving them a puzzle. If they succeed they can go free but if they fail they are executed.

The jailer makes three of the men sit in a line. The fourth man is put behind a screen. All the men are given hats. The jailer explains that there are two red hats and two blue hats. The prisoners can see the hats in front of them but not on themselves or behind. The fourth man behind the screen cannot see or be seen by any other prisoner. No communication between the men is allowed.

If any prisoner can figure out and say out loud to the jailer what colour hat he has on his head all four prisoners go free. The puzzle is to find how the prisoners can escape.



Write down the steps you would take to solve this problem logically. Can you find a solution?

¹ There are many versions of this problem and the general 'hat' problem is attributed to Todd Ebert of the University of California. This general version is well-known but can be found on Wikipedia.