

Warm up

A prison warden constructs a plan to release a prisoner from an overly populated prison. She blindfolds three prisoners and tells them that she will paint a blue or green line on each of their foreheads. Then she removes their blindfolds and orders each prisoner to raise their hand if they see at least one green line. Each prisoner raises their hand because they see two green lines. The warden then explains to the prisoners that she will release the prisoner that determines the color of the line on his or her forehead. To keep the prisoners from guessing, the warden promises the prisoners life in confinement for a wrong answer. A few seconds go by and one smart prisoners says, "I have a green line on my forehead!". The warden releases the smart prisoner. The smart convicted felon is now living happily ever after with her family.

Write down, in complete sentences, how the prisoner knew the color of their line?