

1.2

20. This problem is related to inhabitants of the island of knights and knaves created by Smullyan, where knights always tell the truth and knaves always lie. You encounter two people, A and B. Determine, if possible, what A and B are if they address you in the way described. If you cannot determine what these two people are, can you draw any conclusions?

A says "The two of us are both knights"
and B says "A is a knave."

Answer:

Here, B is ^a knight and A is a knave. If not then say both are

knight but it can't be because the statements of ~~a~~ A and B are contradictory.

Now say, both are knaves but it is also not possible because a knave doesn't tell truth ~~as here~~ and same as the first case it is also contradictory.

If A is a knight and B is a knave then it is also contradictory because if B is knave so he is lying which makes A, a knight but A says both he and B are knight which can not possible, as a knight does not lie.

So only ~~so~~ solution is B is a knight who is saying A is a knave and A is a knave who claims both he and B are knight.