

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

If A is a knight, and the statement "The two of us are both knights" is true, then B would have to be a knight and B's statement "A is a knave" would have to be true. If B's statement is true, it contradicts A's statement about both of them being Knights.

If A is a Knave, and the statement "The two of us are both knights" is false, and if B is a Knave, then B's statement "A is a knave" would be false meaning A is a Knight, but Knights only tell the truth, leading to a paradox.

If A is a Knave, and the statement "The two of us are both knights" is false, and if B is a Knight, then B's statement "A is a Knave" would be true, satisfying the system of Knight's telling the truth and Knaves lying.