

SOME WARM-UP EXERCISES

- (1) The island of Logicos is inhabited by exactly 2 kinds of people: knights and knaves. Knights always tell the truth, and knaves always lie. One day you decide to visit the island, and there you bump into a native of the island. You ask him ‘Are you a knight or a knave?’ What will his answer be?
- (2) After visiting Logicos your cruise ship sinks, and you find yourself abandoned on an island. You stumble upon a native of the island and he says to you “You will never know that I am a knight.” Can you be on the island of Logicos?
- (3) You return to the island of Logicos to find there is a third kind of resident on the island now: cannibals, who neither lie nor tell the truth but instead want to have you for dinner. As you are fleeing a group of hungry island residents you come across a fork in the road, and at that fork there sits a person who is either a knight or a knave (but you don’t know which).
 - You ask him ‘Which way do I go to safety?’ Can you trust his answer?
 - You ask him ‘If I would have asked you which way to go for safety, what would your answer have been?’ to which he responds ‘left.’ Which way should you go?
- (4) There is an island inhabited by monks who are very intelligent but have some very rigid rules that they live by. For one, they believe that blue eyes are evil and if a monk finds out he has blue eyes he must kill himself *that very day*. Another rule is that, despite everyone seeing each other every day, they cannot communicate in any way whatsoever. That, combined with the fact that there are no reflective surfaces on the island, means that the blue-eyed monks never find out their eye color and so all is good for years and years.

But one day a visitor comes to the island and before he leaves, remarks for all to hear that he’s never seen such beautiful blue eyes as on this island.

What happens to the monks?

(In case you think this is a trick question:

- every monk sees every other monk each evening at communal dinner
- it is common knowledge on the island that all monks are rational and obey all monk protocols perfectly.
- monks reason instantly and if one concludes that he has blue eyes he will commit suicide at midnight of that day.
- the visitor’s announcement is made publicly at the dinner.
- the visitor adds nothing but that observation (that there exist blue eyes on the island).)