9. (20 pts) In the movie the Labyrinth Sarah approached two doors which spoke to her. We have the following situation as shown in the youtube clip: http://www.youtube.com/watch?v=2dmgubSmHw (note that she is actually correct in her reasoning though she is punished for saying that it is a piece of cake) Write down a logical argument which determines which door leads to the castle. Number each step in your argument.

(a) One of the doors leads to the castle and one leads to certain death.
(b) One of the doors always tells the truth and one of the doors always lies.
(c) The red door says: The blue door would say that the red door leads to the castle.