CISC 3410 Fall 2012, Homework 6

1. Using the predicates $P(x)$ to denote “$x$ is a politician”, $R(x)$ to denote “$x$ is rich”, $L(x)$ to denote “$x$ is a lobbyist” and $K(x, y)$ to denote “$x$ knows $y$”, write down first order logic, complete with variables and quantifiers to express:

(a) All lobbyists are rich.
(b) Some politicians are rich.
(c) All politicians know a rich lobbyist.
(d) Some lobbyists know a rich politician
(e) Everyone knows a rich politician or a rich lobbyist.