Consider the following program.

cheap(bike).       expensive(car).
cheap(potatoes).   expensive(chips).
poor(student).     rich(teacher).

canbuy(Y, X) :- cheap(X).
canbuy(Y, X) :- expensive(X), rich(Y).

a. (4) Compute the Herbrand model $M$ of this program.

b. (2) The answer to the query $\text{canbuy(car, potatoes)}$ is yes. This answer was not intended by the programmer. Explain why the answer is sound.

c. (2) The query $\text{canbuy(Y, potatoes)}$ does not lead to the answer $Y=\text{car}$. Explain why completeness nevertheless holds.

d. (2) Explain how the intended interpretation in this case is related to the Herbrand model. Is the intended interpretation a model of the program?

e. (1) Is there a model of the program in which $\text{canbuy(student, car)}$ holds? Explain.