CSCC24 Execise 6

1. Translate each of the following into first order logic.

a. $\forall x(\text{student}(x) \rightarrow (\text{walks}(x) \vee \text{drives}(x) \vee \text{rides}(x)))$

b. $\forall x(\text{student}(x) \wedge \text{lives-at}(x, y) \wedge \text{lives-at}(\text{Andrew}, y))$

c. (greater($\exists x(\text{distance}(\exists y(\text{lives-at}(\text{Andrew}, y)), \exists z(\text{Andrew}, z), x))$, ($\exists w(\text{distance}(\text{High Park, St. George}, w))))) \rightarrow (\not\text{walk}(\text{Andrew}))$

d. $\exists x \forall y, z((\text{permits}(x, z, y) \wedge \text{owns}(x, y)) \rightarrow (\text{uses}(x, y)))$

e. $\exists x, y(\text{owns}(x, \text{TTCmaps}) \wedge \text{permits}(x, y, \text{TTCmaps}))$