Section 1.4

6.) a. There is a student in my school who has visited North Dakota.

e. It is not the case that the students in my school have visited North Dakota.

f. All students in my school have not visited North Dakota.

8.) a. For every animal, if it is a rabbit, then it hops.

d. There exists an animal such that it is a bunny and hops.

10.) a. $\exists x(C(x) \land D(x) \land F(x))$

c. $\exists x(C(x) \land F(x) \land \neg D(x))$

d. $\neg \exists x(C(x) \land D(x) \land F(x))$

32.) a. Let us express the predicate, F(x), as "x has fleas", in addition to D(x), which is "x is a dog", with the domain being all animals. The original statement can be written as $\forall x(D(x) \to F(x))$. The negation of this statement is $\neg \forall x(D(x) \to F(x)) \equiv \exists x \neg(D(x) \to F(x))$. In english, it means there exists an animal such that it is a dog and doesn't have fleas.

b. Let us express the predicate, A(x), as "x can add", in addition to H(x), which is "x is a horse", with the domain being all animals. The original statment can be written as $\exists x(H(x) \to A(x))$. The negation of this statement is $\neg \exists x(H(x) \to A(x)) \equiv \forall x \neg(H(x) \to A(x))$. In english, it means for all animals, it is a horse and doesn't add.

Section 1.5

4.) b.

e.