Lesson 10

Conditional Statements—If p then q, where p is the

If there is an intruder then the alarm will sound.

Hypothesis—part of the statement that is between the words *if* and *then.*

Conclusion—part of the statement that follows the word *then*.

True or False

Truth value—A statement is only false when the hypothesis is true and the conclusion is false.

If an animal is a dog then it has a tail. (false, why?)

If a square has a side length of 10 feet then its area measures 50 feet. (false , why?)

HYPOTHESIS IF FALSE—the statement could still be true.

If we win the game then we will eat steak.

(hypothesis is false if we lose the game but the statement is true, only if “we win the game”)

Converse—If q then p.

The hypothesis and conclusion is reversed.

If it rains then we will wear raincoats.

If we wear raincoats then it is raining.