

lab #1

1. Which of these are propositions? What are the truth values of those that are propositions?

a) Do not pass go.

This is not a proposition; it's a command.

b) What time is it?

This is not a proposition; it's a question.

c) There are no black flies in Maine.

This is a proposition that is false.

d) $4 + x = 5$.

This is not a proposition; its truth value depends on the value of x .

e) The moon is made of green cheese.

This is a proposition that is false.

f) $2^n \geq 100$.

This is not a proposition; its truth value depends on the value of n .

2) State whether the argument is **inductive** or **deductive** and identify the *type* of inference employed.

a) No Presbyterians are fundamentalists, but all born-again Christians are. So no born-again Christians are Presbyterians.

b) "Morally right" simply means "doing that which would best promote the needs of human beings." Consequently, alleviating world hunger – which would most certainly promote the needs of human beings – is clearly the morally right thing to do.

c) If the Electoral College could allow the will of the people to be denied, then it ought to be abolished. The Electoral College could allow the will of the people to be denied; therefore it ought to be abolished.

d) Seventy percent of freshmen at Wharfton College come from wealthy families. Therefore, probably about the same percentage of all Wharfton College students come from wealthy families.

e) When blue jays are breeding they become very aggressive. Consequently, scrub jays, which are very similar to blue jays, may also be expected to become aggressive when breeding.

f) Hey, you are over-watering, see? There are mushrooms growing around the base of that tree – a sure sign of over-watering. Also, look at all the worms on the ground. They come up when the earth is over-saturated.

g) All mammals are warm-blooded creatures, and all whales are mammals. Therefore, all whales are warm-blooded creatures.

h) Either Todd studied or he flunked the test. Well, he didn't study...so we know he flunked the test.

i) Mr. Stump, our investment counselor, maintains that earnings for Ford Corporation will be up in the following quarter. Consequently, we would do well to purchase some Ford stock now.

j) If she were still interested in me, she would have called: but she didn't. So, I doubt she's interested.