Assignment #7. Due Thurs March 24.

1. Show that the following simple arguments are valid by translating them into **QL** and using trees. Use the following translation key:

F means ___is rational   m means Jones
G means ___is a philosopher   n means Smith
H means ___is a bad philosopher
I means ___speaks Welsh
L means ___loves___

   (a)   Everyone is rational; hence Jones is rational.
   (b)   No one loves Jones; hence Smith doesn't love Jones.
   (c)   No philosopher speaks Welsh; Jones is a philosopher, hence Jones doesn't speak Welsh.
   (d)   Smith doesn't speak Welsh; hence not everyone speaks Welsh.
   (e)   If Smith is a bad philosopher, then some Welsh speaker is irrational; but every Welsh speaker is rational; hence Smith is not a bad philosopher.

Extra Credit #1 (Optional). Due Thurs March 24.
1. Translate the following from English into **QL** in one of the four categorical quantifier forms ("All *A* are *B*", "Some *A* are *B*", Some *A* are not *B*", "No *A* are *B*"). Use the following translation key.

B means ___is a businessman   P means ___is a politician
C means ___consults a lawyer   A means ___abuses his powers
L means ___has broken the law   I means ___is impeached
M means ___is a millionare   U means ___is sued
T means ___pays taxes   S means ___should have his head examined

   (a)   Some business men are millionares but pay no taxes.
   (b)   Any politician will be impeached if he either has broken the law or abuses his powers.
   (c)   Some millionaire businessmen consult a lawyer only if they either have broken the law or are sued.
   (d)   Every businessman who pays taxes but doesn't consult a lawyer should have his head examined.
   (e)   Some millionare politicians who get sued should have their heads examined only if they are businessmen.