

# Symbolization

September 19, 2013

**Instructions:** Symbolize the following sentences into propositional logic. You should indicate what English statement you assign to your simple statement letters.

1. Either Gandalf is tall, or both Frodo and Sam are short.
2. 7 is neither between 10 and 15 nor before either of them.
3. Neither Earth nor Mars is further from the sun than either Jupiter or Saturn.
4. The bear will not attack if not provoked.
5. Both Six and Eight are cylons, but neither of them is important.
6. A bass is an instrument, not a fish.
7. The witch is wicked only if her skin is green.
8. Dorothy will understand Aristotle given she read Plato.
9. Neither Harry nor Draco will succeed unless they work together and plan accordingly.
10. Sheldon is to the right of Leonard, provided Sheldon sits in his usual spot.
11. If you're in the lab, you cannot handle chemicals unless you wear goggles.
12. If Sherlock Holmes is real, then he'll take the case if and only if it's interesting.
13. The master fights only when he must.
14. The day she graduates will be the day she becomes a real doctor.
15. I'll go to graduate school when pigs fly.
16. He'll pass just in case he studies.
17. By being alienated from her community, Hester develops a novel perspective on the nature of sin, but her revelation must remain internal—symbolic of each of our own meditations—for she cannot voice her ruminations provided that she still lives in a Puritan society bearing the scarlet 'A'.