Translate the following into predicate logic, and apply the tree method to check the validity of the argument. In case the argument is invalid, provide a counterexample.

(1) If Abe ambles, he smokes. Everyone who smokes drinks. Therefore, Abe doesn’t drink if he doesn’t amble.

(2) Beth bites everyone who doesn’t cook. If Carl cooks, Dan dances. Therefore, if Dan doesn’t dance, Beth bites someone.

(3) Everyone Emma entertains sleeps. Emma doesn’t sleep if she entertains someone. Therefore, Emma doesn’t entertain herself.

(4) Fred fixes everything that is broken. Nothing is broken. Therefore, Fred fixes nothing.