Translate all sentences using the following translation scheme. Your final translation should be a WFF.

A: Andy goes to school  P: Andy has troubled dreams
B: Bill goes to school  Q: Bill has troubled dreams
C: Cindy goes to school  R: Cindy has troubled dreams
D: Andy stays home  S: Andy is transformed into a horrible vermin
E: Bill stays home  T: Bill is transformed into a horrible vermin
F: Cindy stays home  U: Cindy is transformed into a horrible vermin

1. Andy will not have troubled dreams unless Bill is transformed into a horrible vermin.

2. If Andy goes to school, then Bill will go to school only if Cindy does too.

3. If Bill stays home only if Cindy stays home and Andy stays home only if Bill stays home, then Andy stays home only if Cindy stays home.

4. Andy will have troubled dreams if and only if he is transformed into a horrible vermin.

5. Provided that Bill is transformed into a horrible vermin, Andy will not stay home unless Cindy stays home.

E.C. (.5 pts each)

Although Bill has troubled dreams but does not transform into a horrible vermin, Cindy does not have troubled dreams but does transform into a horrible vermin.

Andy stays home provided that he is transformed into a horrible vermin, unless Cindy does not stay home.