In class Lecture sheet on Logical Arguments

1) If Fred goes to the dance then so will Jane. Jane did go. Therefore Fred must have gone.

2) If it rains then the game is off. It did not rain. Therefore the game was played.

3) If you do not pass the course then you did not study. You did study. Therefore you did pass the course.

4) If the dog barks, then the mail is here. The dog did bark, so the mail is here.

5) All healthy people eat an apple a day. Herbert is not healthy. Herbert does not eat an apple a day.
6) All honest people pay their taxes. Jane does not pay her taxes. Jane is not honest.

7) All freshmen must take writing. Caroline takes writing, so Caroline is a freshman.

8) I am happy if my program runs.

My happiness is a necessary condition for me to enjoy life.

∴ If my program runs, then, if I enjoy life, then I am happy.

9) A set of premises is given below: Determine and justify the conclusion.

a) \((\sim p \lor q) \rightarrow r\)

b) \(s \lor \sim q\)

c) \(\sim t\)

a) \(p \rightarrow t\)

a) \((\sim p \land r) \rightarrow \sim s\)

Therefore...