1. Write out in words the converse, inverse, and contrapositive of the following statement: "If I don't work hard, then I don't get a good grade." Label which is which. *(7 points)*

- 2. Determine if the following two statements are logically equivalent. Explain. (6 points)
 - (a) You are a fool if you listen to me.
 - (b) You are not a fool only if you do not listen to me.

If you follow the rules, you have no trouble. If you are not clever, you have trouble. You are clever. Therefore, you do not follow the rules.

^{3.} Write a symbolic expression for the following argument. The build its truth table to deterine if the argument is valid. *(7 points)*