Here is another of Lewis Carroll’s puzzles. As in the homework, a) write the obvious conclusion from given statements; and b) justify the conclusion, by writing a chain of arguments which leads to it. It may help to write the given statements and conclusion by logical formulas (denoting the statements which are used by letters $A, B, \ldots$ connected by logical operations OR, AND, $\implies$, $\ldots$)

All hummingbirds are richly colored.
No large birds live on honey.
Birds that do not live on honey are dull in color.

(2) Prove that for any real $a$, we have $-|a| \leq a \leq |a|$. You can use any properties of real numbers on pp. 18–19, 24 in the textbook and also everything we have proved in class, but no other results.