MAT 200, Quiz 2

June 9, 2011

Your name:_____ ID number_____

(1) 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.