

University of California at Berkeley
College of Engineering
Department of Electrical Engineering and Computer Science

EECS150, Spring 2010

Quiz 1: January 29

A *minority function* produces a TRUE output if and only if fewer than half of its inputs are TRUE. Otherwise it produces a FALSE output.

1. In the space below fill in the truth table for a minority function y , with inputs a , b , and c .

abc	y
000	
001	
010	
011	
100	
101	
110	
111	

2. Neatly draw a gate-level circuit diagram that implements the truth-table using only AND-gates, OR-gates (any number of inputs) and inverters. Label the inputs and output.