ECE 0142 Computer Organization
Homework 4
Assigned: 2/2/2016, Due: 2/9/2016

1. In the implementation of carry lookahead adder, the propagation bit is obtained from
$$pi = a_i + b_i.$$
However, in the logic implementation of the adder, p_i is produced through an XOR gate (see slide pp. 33 of the "Arithmetic Logic Unit" lecture). This is to reduce the gate count of the adder and it works. Please justify.