ECE2030 Homework 1
Due 1/15/04

1. Build switch circuits to implement the following Boolean algebra expressions. In each case, determine the number of transistors used for the design.

a) $F = AB\overline{C}(D+E)$

b) $F = AB\overline{(C+D)}$

b) $F = (A+\overline{B})\overline{(C+D)}$

2. Use DeMorgan's Law to simplify the following expressions to remove long bars (bars over multiple signals).

   a) $F = \overline{A(B+\overline{CD})}$

   b) $F = \overline{(A+\overline{B})}\,\overline{(C+\overline{D})}$

   c) $F = \overline{\overline{AB}+C\overline{D}}$