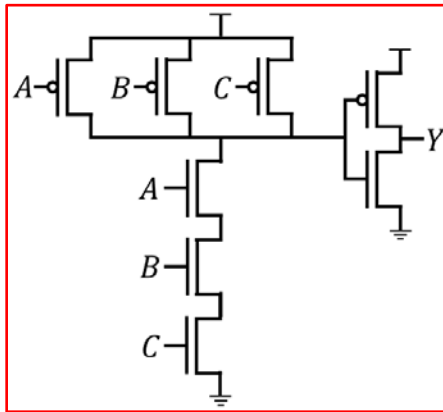
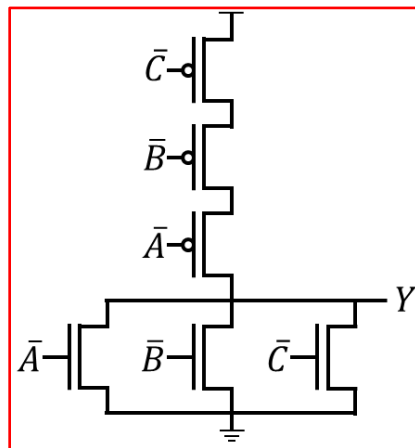


Homework Assignment 4
(Due 5pm, Jan. 29, email to daehyun@eecs.wsu.edu)

- (1) [Analysis, 10 points] Solve Problem #1 of the EE434 2015 Spring Midterm Exam 1.
- (2) [Analysis, 10 points] Solve Problem #1 of the EE434 2016 Spring Midterm Exam 1.
- (3) [Design, 30 points] Design $Y = A \cdot B \cdot C$ (three-input AND gate) using the static CMOS design style in three different ways. Available inputs: A, B, C . The first design should use eight TRs (four NFETs and four PFETs). The second and third designs should use 12 TRs (six NFETs and six PFETs).



$$Y = \overline{\overline{A \cdot B \cdot C}} = \overline{\overline{A} + \overline{B} + \overline{C}}$$



$$Y = (A \cdot B) \cdot C$$

