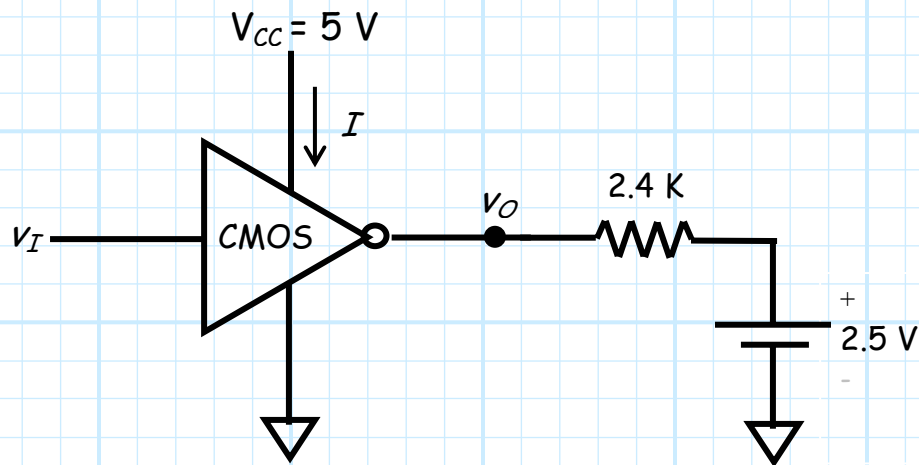


### Special Problem 4.10-2

Consider the **CMOS inverter** below.

The inverter is made with a complementary pair of MOSFETs, with  $k=1.25 \text{ mA/V}^2$  and  $V_T = 1.0 \text{ V}$ .



- 1) Find the **approximate** value of  $v_O$  (using any valid simplifying approximation) if  $v_I = 0.0 \text{ V}$ .
- 2) Find the **approximate** value of  $v_O$  (using any valid simplifying approximation) if  $v_I = 5.0 \text{ V}$ .