## Special Problem 4.4 - 1

Select the value of R in the circuit below so that both conditions

 $V_{I}$ 

$$v_O = 4.8 \text{ V}$$
 if  $v_I = 0.0 \text{ V}$  (PMOS in cutoff)

and

$$v_O = 0.0 \text{ V if } v_I = 5.0 \text{ V (PMOS in triode)}$$

are satisfied.

$$K = 0.1 \text{ mA/V}^2$$

$$V_t = -2.0 \text{ V}$$

**-0 V**O



5.0 V