

HW #2  
(Due: March 30, 2011)Part 1:

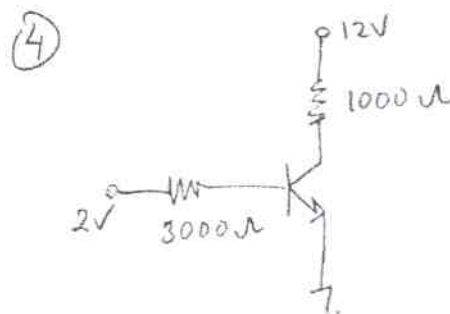
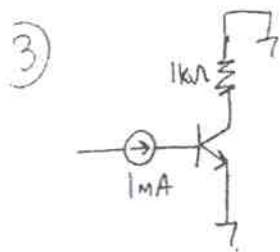
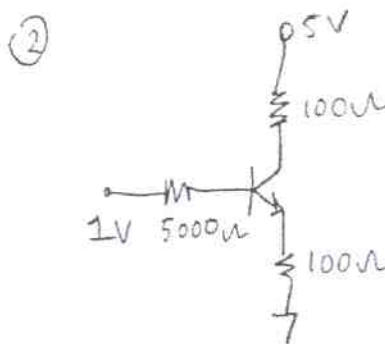
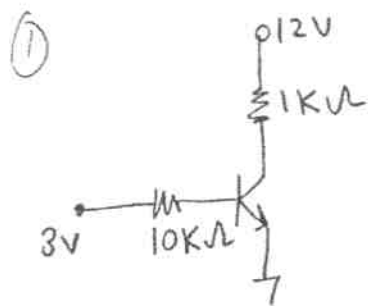
Find the state and  $I_C$ ,  $I_B$ ,  $I_E$ ,  $V_{BE}$ ,  $V_{BC}$ ,  $V_{CE}$  of the following transistor bias circuits.

Parameters:  $V_{BE(ON)} = 0.7V$

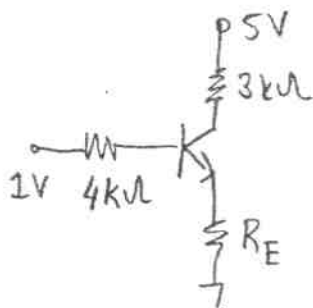
$V_{BE(SAT)} = 0.8V$

$V_{CE(SAT)} = 0.2V$

$\beta_{FA} = 50$

Part 2: (Use same parameters)

⑤ Find a range for  $R_E$  so that transistor is in FA.



⑥ Find a range for  $R_C$  so that transistor is in SAT.

