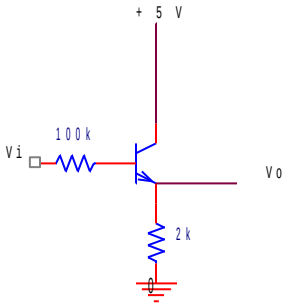
**Sample Test 3**

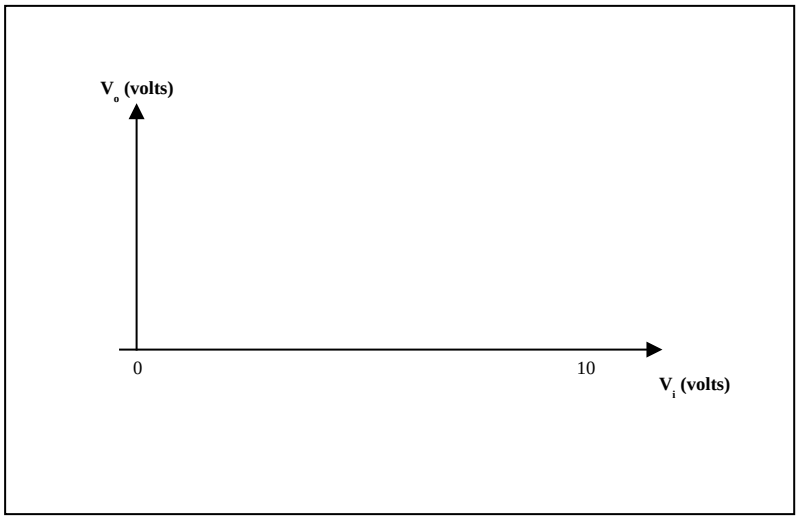
**For all problems assume (1) $V_{BE(ON)} = V_{EB(ON)} = 0.7$ volts, (2) $V_{CE(SAT)} = V_{EC(SAT)} = 0.2$ volts**

**Q1** For the transistor circuit shown,

a) (4)Sketch the transfer characteristic **$V_i$ vs. $V_o$ for $0 < V_i < 10$ volts.** Use the graph axes supplied. Assume **$\beta = 100$, $V_A = \infty$.**

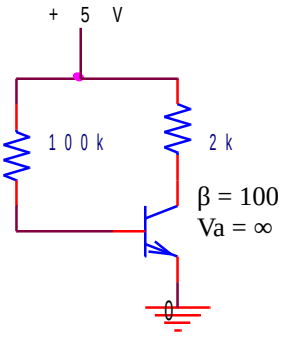



Part (a)




**Q2** For the circuits shown find the indicated quantities.

Part (a)

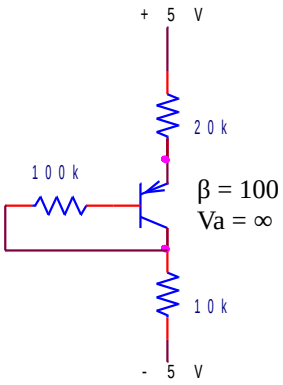



$I_B$ = _____

$I_C$ = _____

$V_{CE}$ = _____

Part (b)




$I_B$ = _____

$I_C$ = _____

$V_{EC}$ = _____

**Sample Test 3**

**For all problems assume (1) $V_{BE(ON)} = V_{EB(ON)} = 0.7$ volts, (2) $V_{CE(SAT)} = V_{EC(SAT)} = 0.2$ volts**

**Q3** The circuit shown is called a complementary push-pull amplifier stage. For the input (Vi) shown sketch the corresponding output (**Vo**).