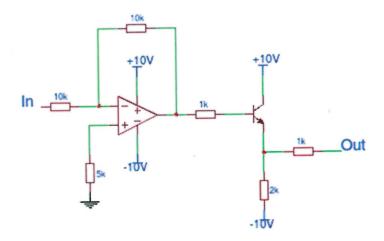
## 9 Circuit Analysis



- a) What voltage will appear on the output if negative 3 volts is applied to the input? Give your answer to the nearest 100mV
- b) What is the input impedance of this circuit?
- c) What is the output impedance of this circuit?
- d) What is the purpose of the  $5K\Omega$  resistor connected to the positive input of the amplifier?
- e) What is the transistor's collector current with no load on the output and -3 Volts on the input?
- f) If the  $\pm 10$  Volt supply rises to  $\pm 15$ V, what will the collector current be?
- g) With positive 3 volts applied to the input, what will the voltage be on the negative input of the operational amplifier with respect to ground?