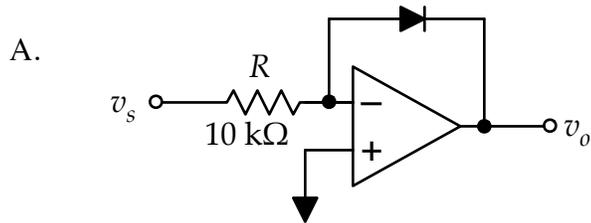
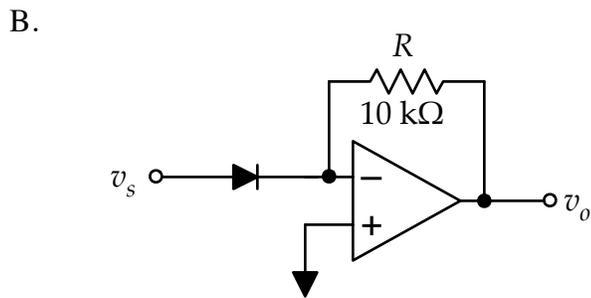


Calculate v_o as a function of v_s for the diode/op-amp circuits shown. In each case, the op-amp is ideal, the diode has scale factor $I_S = 10^{-14}$ A, and the circuit is operating at room temperature. Note that you must use the exponential i - v relationship for the diode. (The on-off model of the diodes will *not* describe the operation of the circuit.)



$v_o =$ _____



$v_o =$ _____