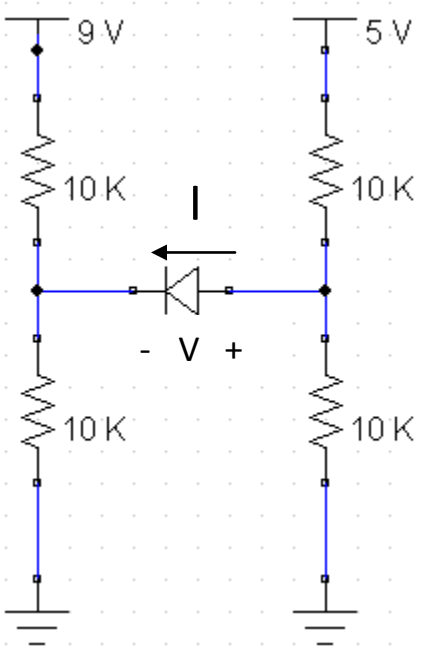
1) Same as problem 5

Assuming ideal Diodes, find the labeled current and voltages



2) The circuit shown is a model of a battery charger. Here V1 is a 10-V peak sine wave, D1 and D2 are ideal diodes, I is a 100mA current source , and B is a 4.5-V battery.

Sketch the waveform of the battery current I_B. What is its peak value? What is its average value?

If the peak value of V1 is reduced by 10%, what do the peak and average values of I_B become?