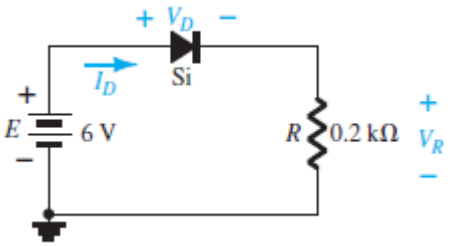
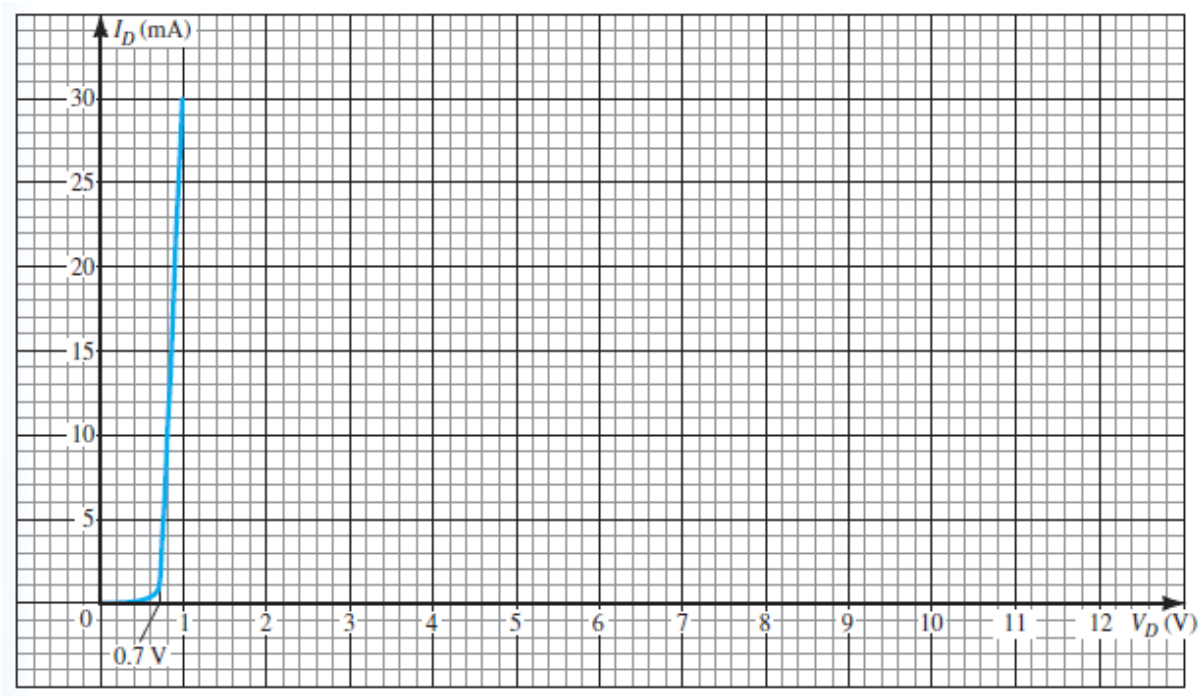
Check your calculations and results by using LTSpice to simulate the circuits

1.

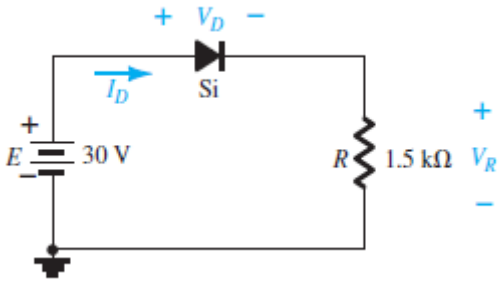
a. Using the characteristics shown below , determine I_D and V_D for the circuit shown below .
b. Repeat part (a) with R = 0.47 k_.
c. Repeat part (a) with R = 0.68 k_.
d. Is the level of V_D relatively close to 0.7 V in each case?
How do the resulting levels of I_D compare? Comment accordingly.



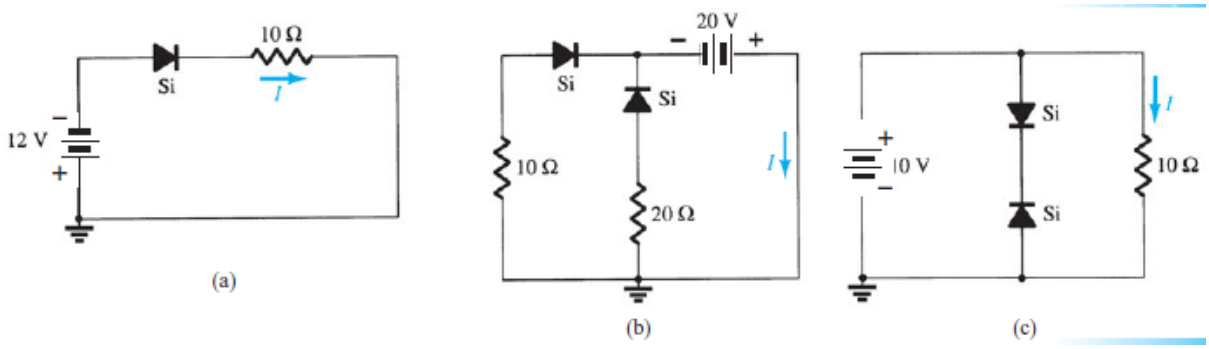


2.

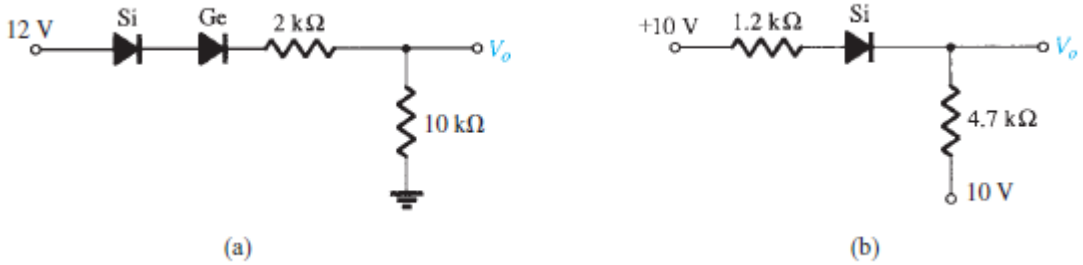
a. Using the approximate characteristics for the Si diode, determine V_D, I_D, and V_R for the circuit shown below.
b. Perform the same analysis as part (a) using the ideal model for the diode.
c. Do the results obtained in parts (a) and (b) suggest that the ideal model can provide a good approximation for the actual response under some conditions?



3. Determine the current *I* for each of the configurations shown below, using the approximate equivalent model for the diode.



4. Determine the level of V_o for each network shown below



5. Determine V_o and I for the networks shown below.