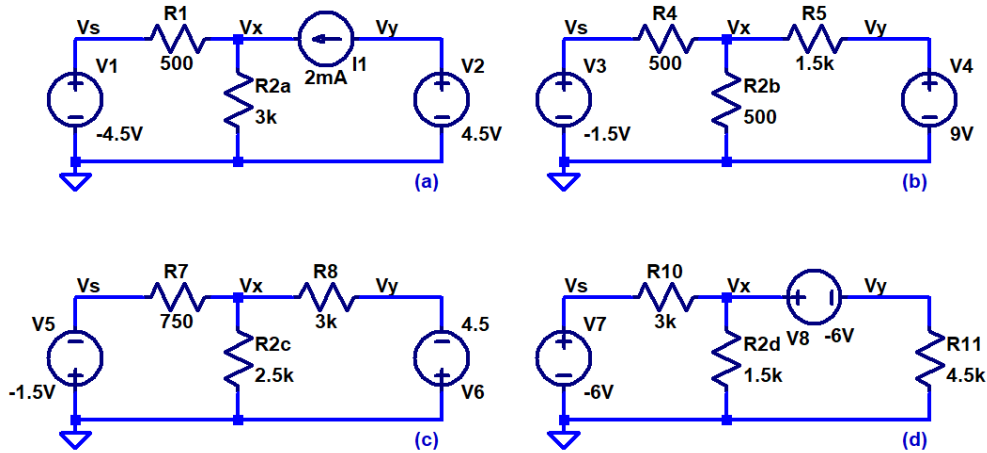
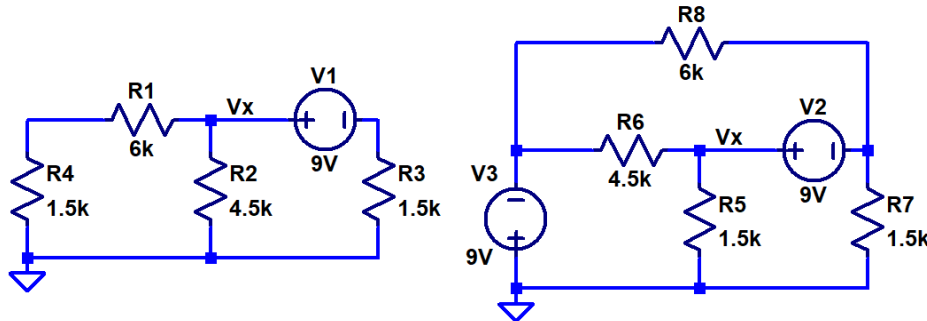


Show your work for credit!

- Find the Thevenin and Norton equivalent circuits between  $V_x$  and ground with  $R_2$  removed. Show that when you connect  $R_2$  to the Thevenin and Norton equivalents that you get the same value for  $V_x$ . Verify your hand calculations using LTspice. Note that you can also Thevenize the circuits between  $V_x$  and ground with  $R_2$  present. (8 points)



- Determine the currents and voltages in the following circuits using mesh analysis. Verify your hand calculations using LTspice. (4 points)



- Find all voltages in the following circuit. Verify your hand calculations using LTspice. As always, show your work for credit. (2 points)

