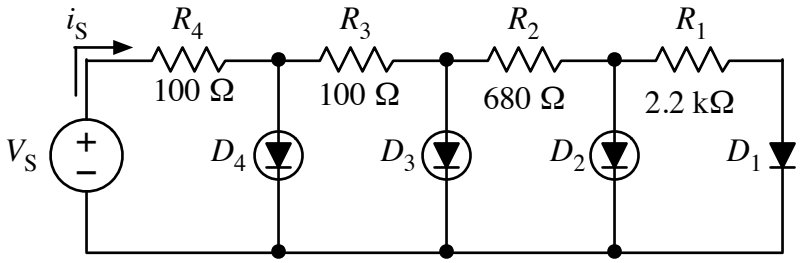
EE 230 — HW 4.7 Name_____

The circuit below uses 4 different diodes — one standard silicon (D_1) and 3 LEDs of different colors. Since the LEDs are made with different semiconductors, they have different "on" voltages. The on voltages for the three LEDs are 1.25 V for D_2 (red), 2.5 V for D_3 (green), and 3.25 V for D_4 (white). As with the silicon diode, the LEDs can be treated as being off if there is less than the "on" voltage available, and they will have the given voltage drops when they are on and conducting current.

For the circuit, calculate the current being delivered by the source for four different values of the source voltage: V_S = 1 V, 2 V, 3 V, and 5 V.



V_S = 1 V: i_S = _____ V_S = 2 V: i_S = _____

V_S = 3 V: i_S = _____ V_S = 5 V: i_S = _____

Put your answers — and whatever work will fit — on this sheet. Staple any sheets with additional work behind.