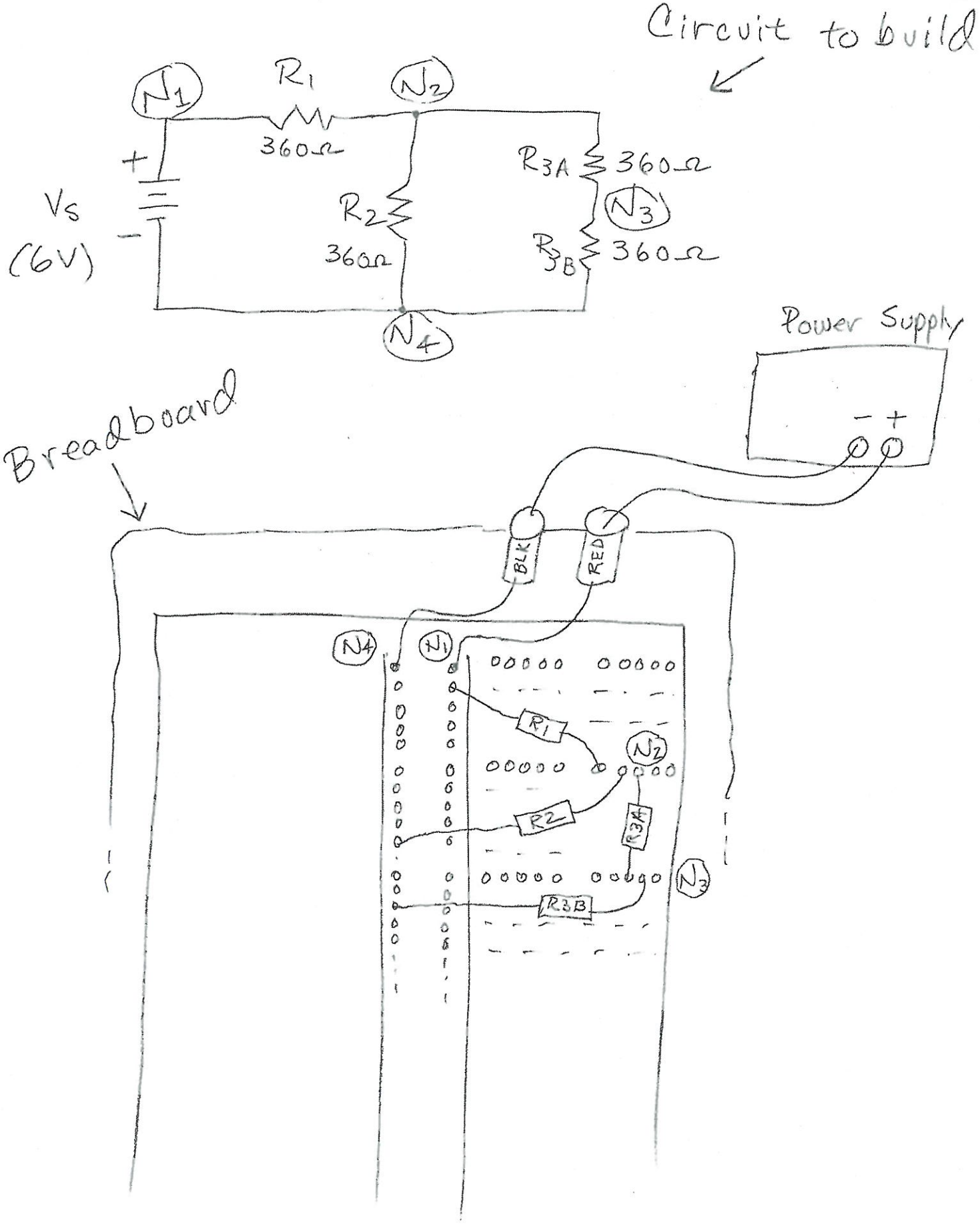
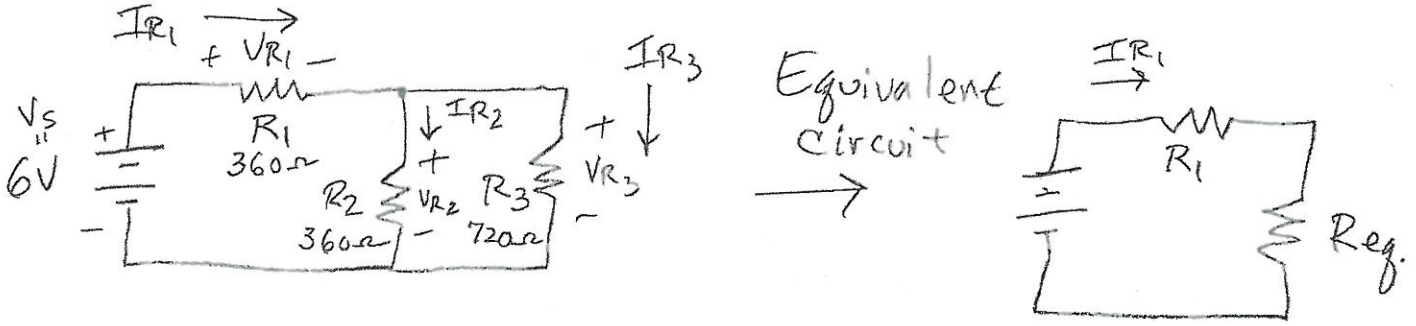
EGR 182 Lab #4 - Handout 1A



EGR 182 Lab #4 - Handout 1B

Let's predict our measurements, using Ohm's Law and KVL:



$$R_{eq.} = \frac{R_2 \cdot R_3}{R_2 + R_3} = \frac{360 \cdot 720}{360 + 720} = 240\,\Omega$$

$$I_{R_1} = \frac{V_S}{R_1 + R_{eq}} = \frac{6V}{360 + 240} = \frac{6V}{600\Omega} = 0.01A = \boxed{10mA}$$

$$V_{R_1} = I_{R_1} \cdot R_1 = 0.01A(360\Omega) = \boxed{3.6V}$$

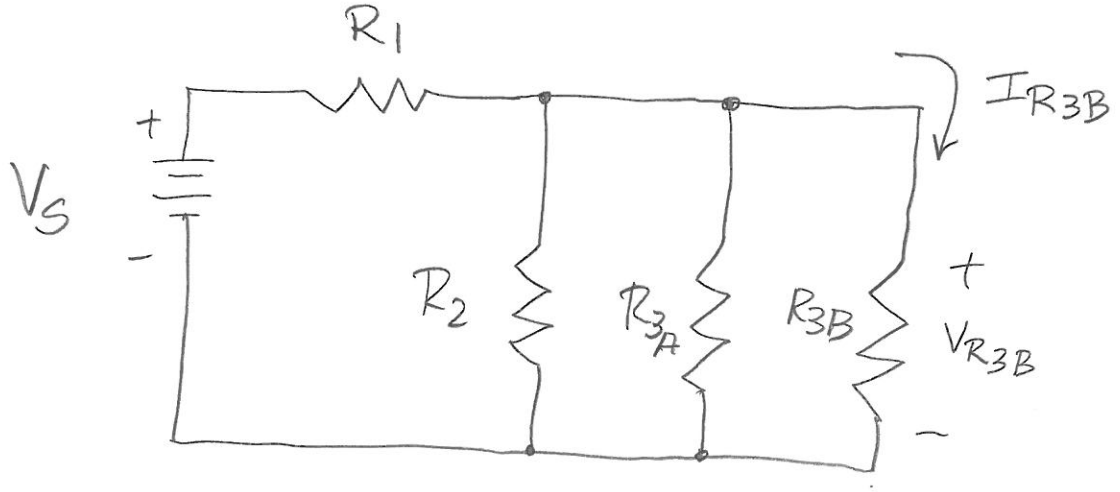
$\therefore$ By KVL: $6V = V_{R_1} + V_{R_2}$

$$\therefore V_{R_2} = 6V - V_{R_1} = 6V - 3.6V = \boxed{2.4V}$$

$$I_{R_2} = \frac{V_{R_2}}{R_2} = \frac{2.4V}{360\Omega} = \boxed{6.7mA}$$

$$\therefore I_{R_3} = 10mA - 6.7mA = \boxed{3.3mA}$$

EGR 182 Lab #4 - Handout 2



Circuit for Exercises 2 and 5

(all resistors = 360 Ω)