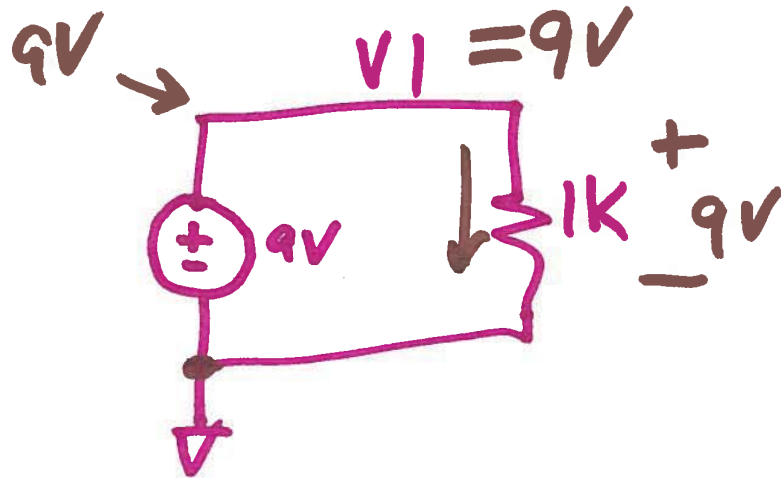


EE 220

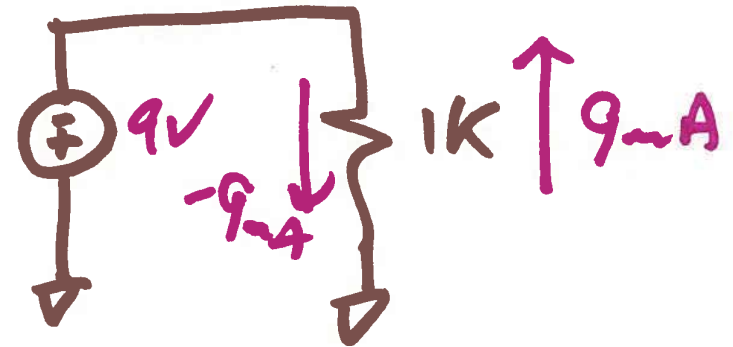
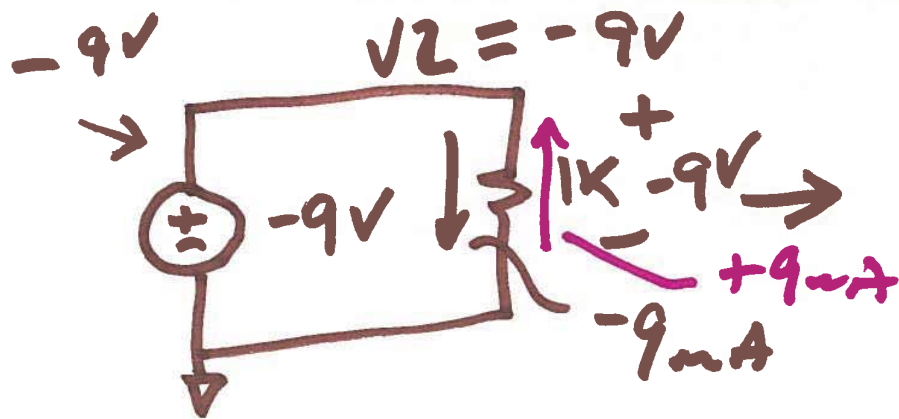
Circuits I

H.W. #1 examples



$$I = \frac{V}{R}$$

$$I = \frac{9}{1k} = 9mA$$



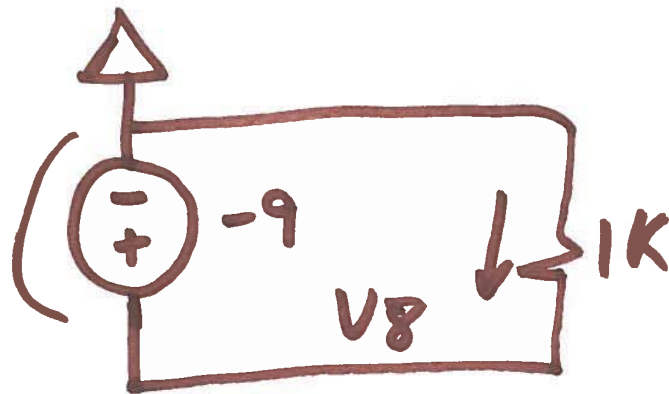
Handwritten equations for a resistor with current I and voltage V :

$$V = I \cdot R$$

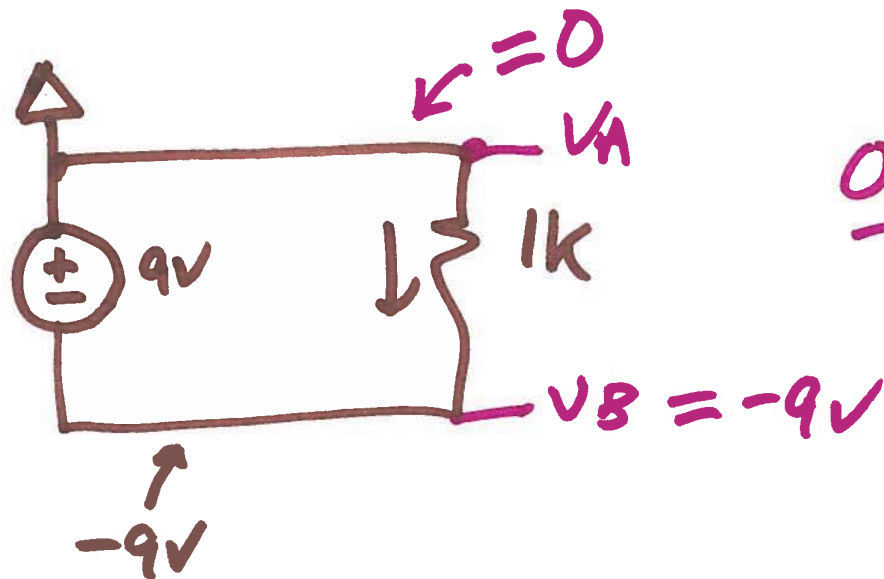
$$-9 = I \cdot R$$

$$I = -9mA$$

2)



$$V_8 = -9V$$



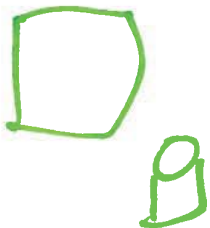
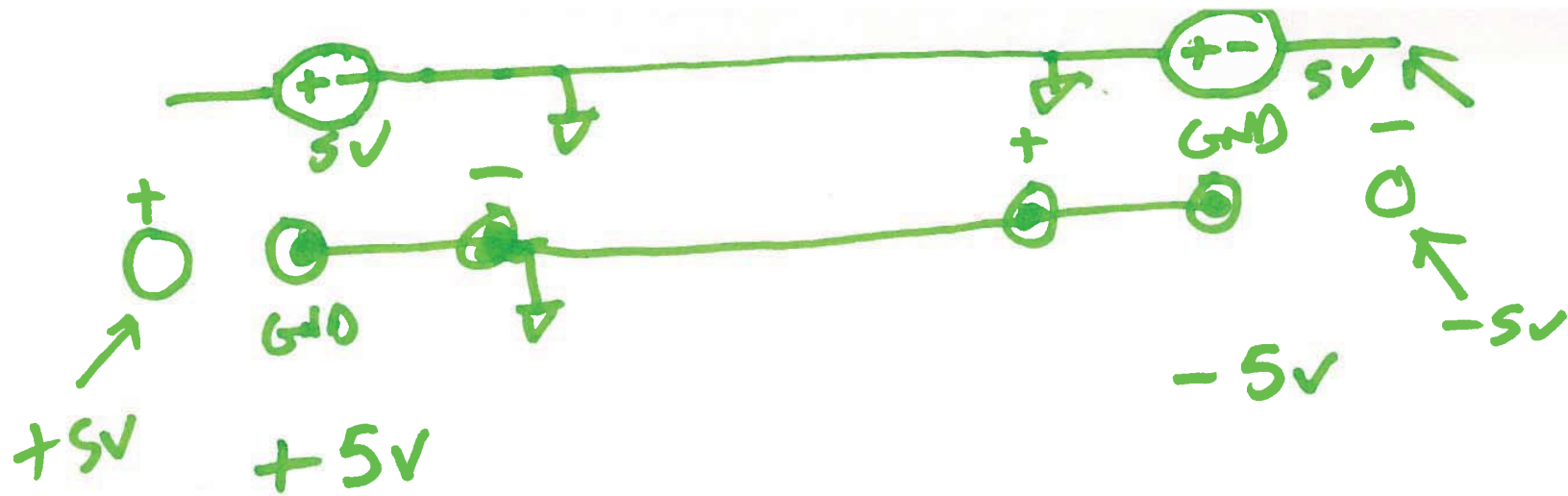
$$V_A - V_B = V$$

$$V = IR$$

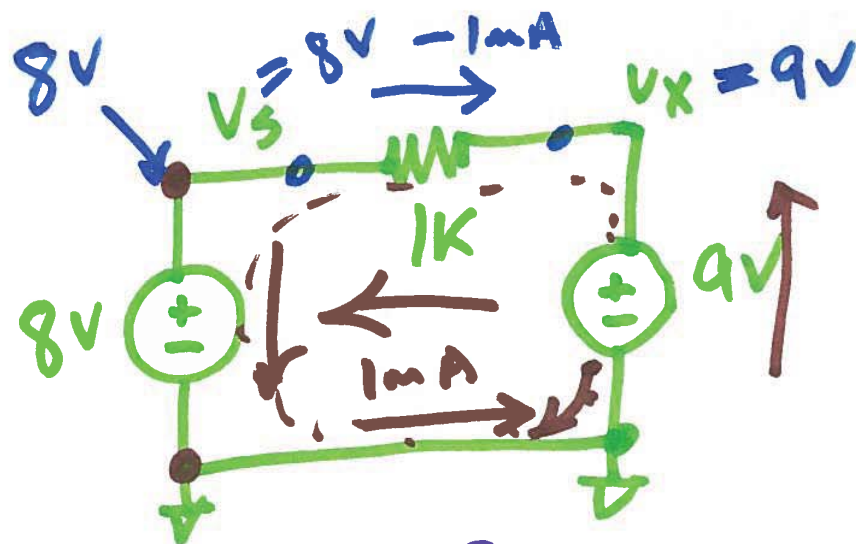
$$\frac{V_A - V_B}{R} = I$$

$$\frac{0 - (-9)}{1K} = I$$

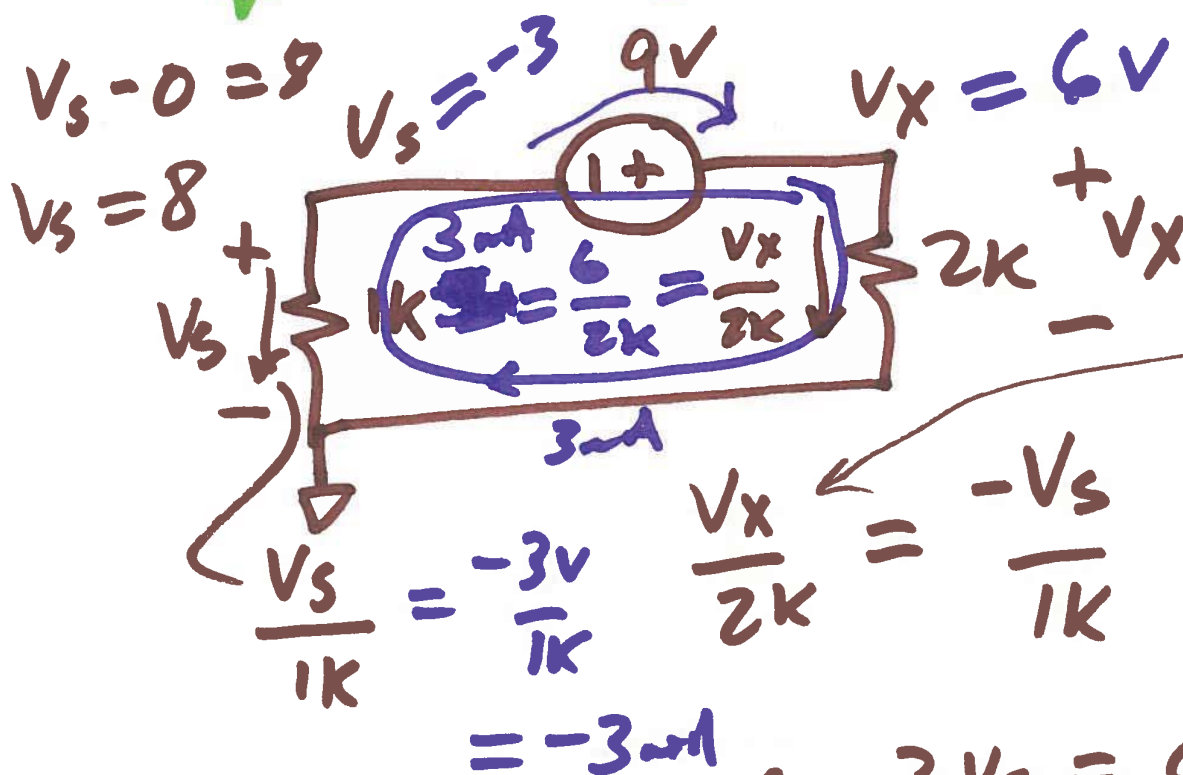
$$\underline{\underline{I = 9\mu A}}$$



4)



$$I = \frac{V_s - V_x}{1k} = \frac{8 - 9}{1k} = -1mA$$



$$V_x - V_s = 9$$

$$V_x = 9 + V_s$$

$$\frac{9 + V_s}{2k} + \frac{V_s}{1k} = 0$$

$$9 + V_s + 2V_s = 0$$

$$9 + 3V_s = 0$$

$$V_s = -3V$$

5)