

# PHYSICS II FINAL EXAM REVIEW - ELECTRICITY + CIRCUITS

Name: \_\_\_\_\_

① Consider the following circuit.

a) When no current flows,  $V$  is measured at  $9.0\text{ V}$  and  $R = 20\ \Omega$ .

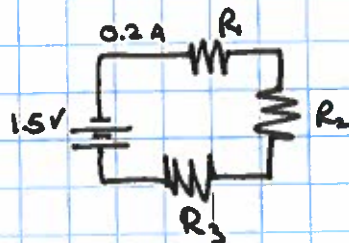
Ideally, what would  $I$  be?



b) Actually,  $I$  is measured at  $0.42\text{ A}$ . Why?

c) Find the internal resistance,  $r$ , of the battery.

② a) Find  $R_T$ .



b)  $R_1 = 5\ \Omega$ .  $R_2 = R_3$ . Find  $R_2$  and  $R_3$ .

③ Find each of the missing quantities.

$$V_T = 6.0 \text{ V}$$

$$I_T = 2.0 \text{ A}$$

$$R_T =$$

$$R_1 = 5 \ \Omega$$

$$R_2 = 10 \ \Omega$$

$$R_3 =$$

$$V_1 =$$

$$V_2 =$$

$$V_3 =$$

$$I_1 = 1.2 \text{ A}$$

$$I_2 =$$

$$I_3 =$$

