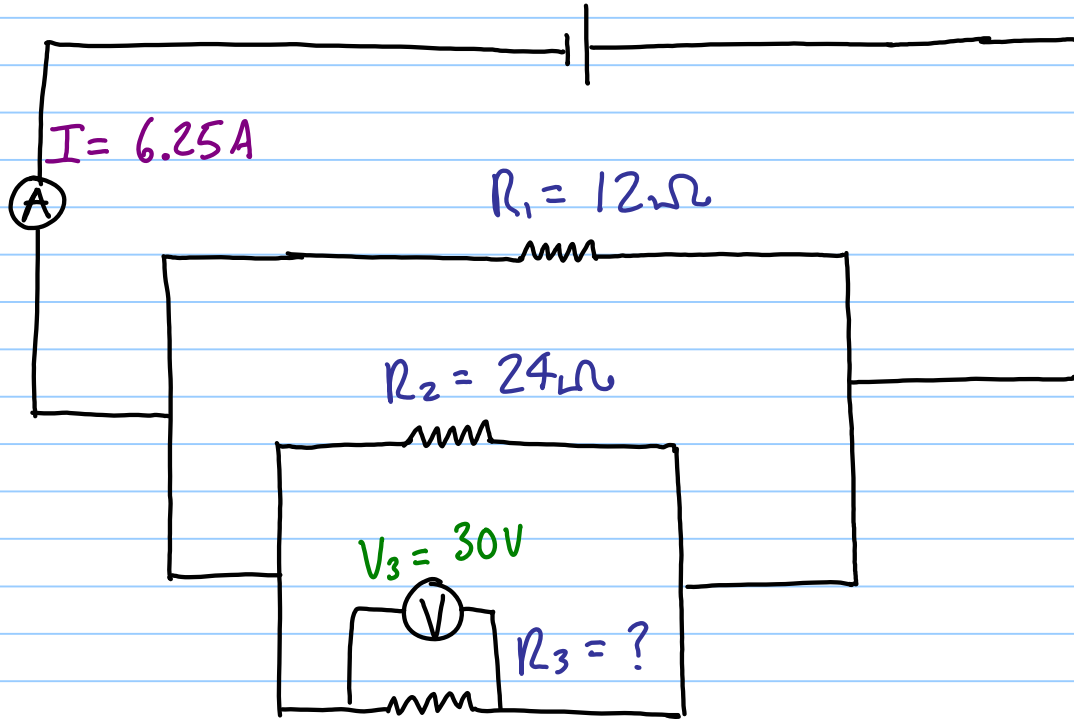
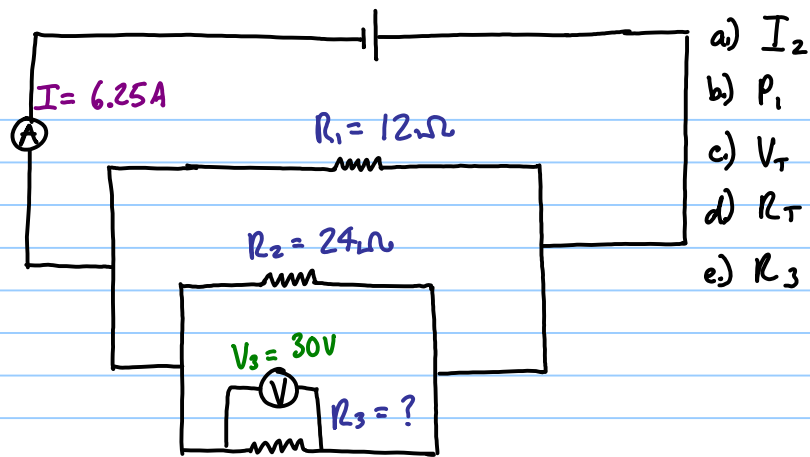


Quiz 3c



- a) I_2
- b) P_1
- c) V_T
- d) R_T
- e) R_3



- a) I_2
- b) P_1
- c) V_T
- d) R_T
- e) R_3

$$a) \quad V_3 = V_2 = V_1 \quad I_2 = \frac{V_2}{R_2} = \frac{30V}{24\Omega} = \boxed{1.25A} \quad \checkmark$$

$$b) \quad P_1 = \frac{V_1^2}{R_1} = \frac{(30V)^2}{24\Omega} = \boxed{37.5W} \quad \checkmark$$

$$c) \quad V_T = V_1 = \boxed{30V} \quad \checkmark$$

$$d) \quad R_T = \frac{V_T}{I_T} = \frac{30V}{6.25A} = \boxed{4.8\Omega} \quad \checkmark$$

$$e) \quad I_1 = \frac{V_1}{R_1} = \frac{30V}{12\Omega} = 2.5A$$

$$I_3 = I_T - I_1 - I_2 = 6.25 - 2.5 - 1.25 \\ = 2.5A$$

$$R_3 = \frac{V_3}{I_3} = \frac{30V}{2.5A} = \boxed{12\Omega} \quad \checkmark$$