

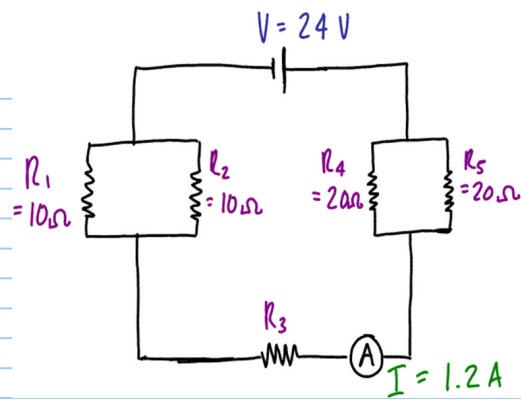
$$R_3 = ?$$

$$I_1 = ?$$

$$V_5 = ?$$

$$P_4 = ?$$

$$P_T = ?$$



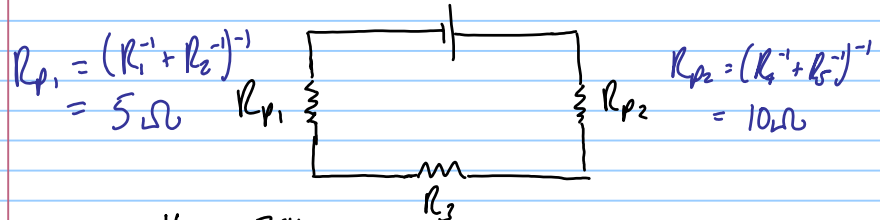
$$R_3 =$$

$$I_1 =$$

$$V_5 =$$

$$P_4 =$$

$$P_T =$$



a) $R_T = \frac{V_T}{I_T} = \frac{24V}{1.2A} = 20\Omega$

$R_T = R_{p1} + R_3 + R_{p2}$
 $R_3 = R_T - R_{p1} - R_{p2}$
 $= \boxed{5\Omega}$ ✓

b) $V_{p1} = I_{p1} R_{p1} = (1.2A)(5\Omega) = 6V$

$V_{p1} = V_1$

$I_1 = \frac{V_1}{R_1} = \frac{6V}{10\Omega} = \boxed{0.6A}$ ✓

c) $V_{p2} = I_{p2} R_{p2} = (1.2A)(10\Omega) = 12V$

$V_{p2} = V_5 = \boxed{12V}$ ✓

d) $V_4 = V_5 = 12V$
 $P_4 = \frac{V_4^2}{R_4} = \frac{(12V)^2}{20\Omega}$

$= \boxed{7.2W}$ ✓

e) $P_T = I_T V_T$

$= (1.2A)(24V) = \boxed{28.8W}$ ✓