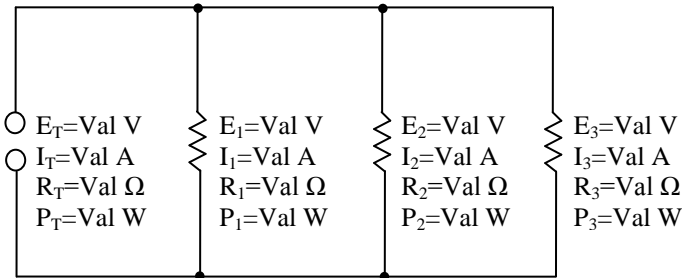




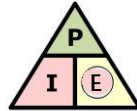
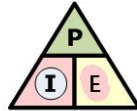
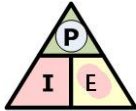
INTRODUCTION TO PARALLEL CIRCUIT CALCULATIONS

A parallel circuit is a circuit (cct) which all the devices are connected so that there is more than one path for current to flow. Certain rules apply to a parallel cct. Using Ohms Law and Parallel circuit laws we can easily determine missing values if we have enough variables known. This can aid in trouble shooting circuits quickly and understand what is happening in a cct.



		Parallel laws			
		L_1	L_2	L_3	L_T
Ohms Law	E v	$E_1 = E_2 = E_3 = E_T$			
	I A	$I_1 + I_2 + I_3 = I_T$			
	R Ω	$\frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}} = R_T$			
	P W	$P_1 + P_2 + P_3 = P_T$			

$E = I \times R$
 $I = \frac{E}{R}$
 $E = I \times R$



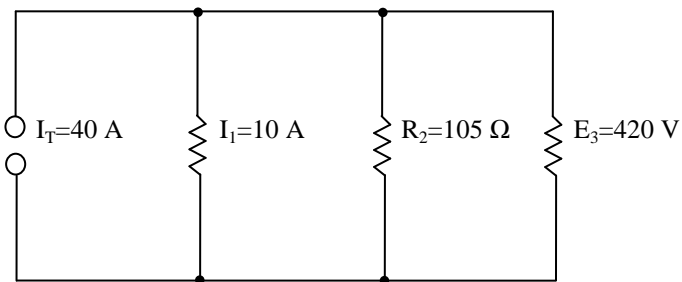
$P = I \times E$

$I = \frac{P}{E}$

$E = \frac{P}{I}$

SAMPLE QUESTION

Show order of operations, formulas, substitution, units, and all rough work calculations using appropriate units-of-measure, 2 decimal places, with all answers circled. Half mark for the correct answer, the other half for all work shown. **Bonus mark** for properly & correctly double-checking, using a formula not yet used.



		Parallel laws			
		L_1	L_2	L_3	L_T
Ohms Law	E v				
	I A				
	R Ω				
	P W				