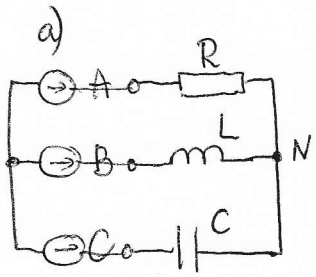
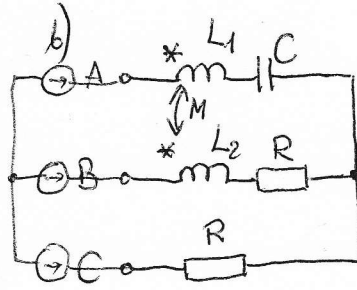


Tutorials - C&S No 9

1. Calculate currents, power of elements and balance of power

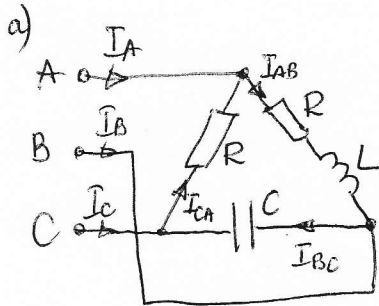


$|E_f| = 300V$
 $R = 10\Omega, \omega L = 10\Omega, \frac{1}{\omega C} = 10\Omega$

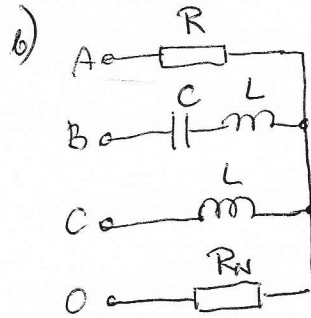


$|E_f| = 200V$
 $R = 10\Omega$
 $X_{L1} = 30\Omega$
 $X_{L2} = 20\Omega$
 $X_M = 10\Omega$
 $X_C = 20\Omega$

2. Calculate currents in the circuit and draw the phasor diagram

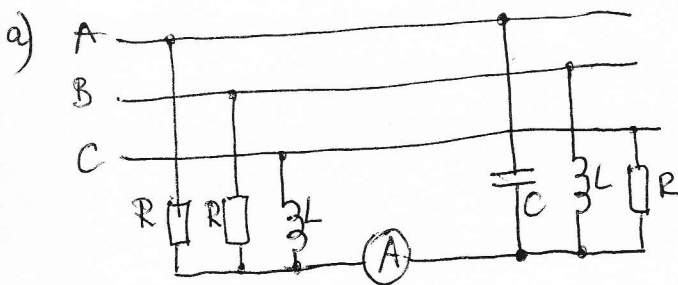


$|E_f| = 1000V$
 $R = 100\Omega, X_L = 100\Omega, X_C = 50\Omega$

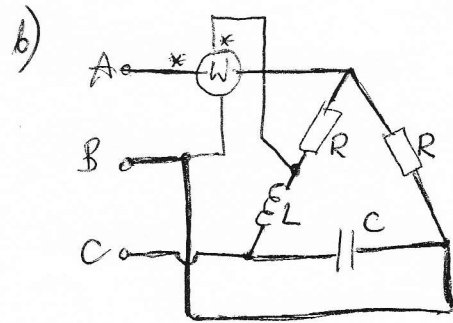


$|E_f| = 600V$
 $R = 10\Omega$
 $X_L = 20\Omega$
 $X_C = 20\Omega$
 $R_N = 5\Omega$

3. Calculate current of the ammeter and power of wattmeter

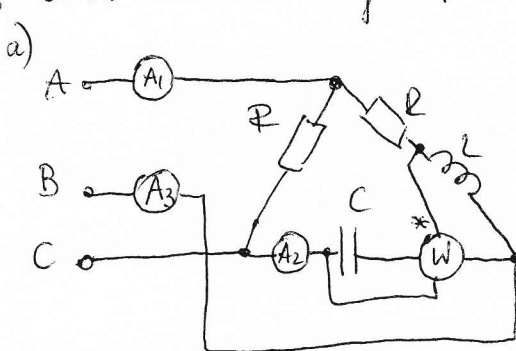


$|E_f| = 500$
 $R = 10\Omega, X_L = 10\Omega, X_C = 5\Omega$

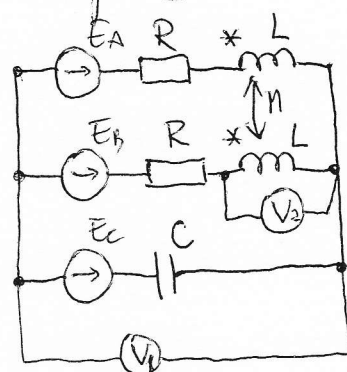


$|E_f| = 400V$
 $R = 20\Omega, X_L = 20\Omega, X_C = 10\Omega$

4. Calculate the readings of the instruments in 3-phase circuit



$|E_f| = 400V$
 $R = 10\Omega, X_L = 10\Omega, X_C = 10\Omega$



$|E_f| = 1000V$
 $R = 100\Omega$
 $X_L = 100\Omega$
 $X_M = 50\Omega$
 $X_C = 50\Omega$