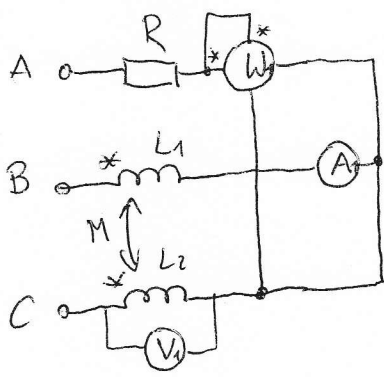


# Zadanie do kolokwium 2 - przygotowanie

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

a)

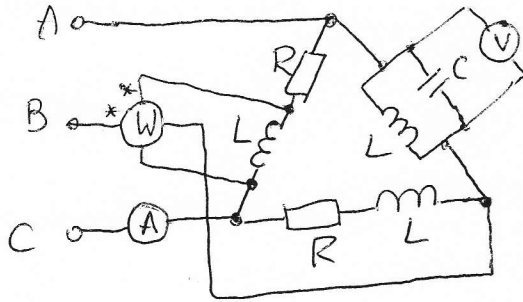


$$U_{ph} = 600, R = 10\Omega, X_{L1} = 20\Omega$$

$$X_{L2} = 20\Omega, X_M = 10\Omega$$

Draw the phasor diagrams for the circuit

b)



$$U_{ph} = 1000V, R = 20\Omega, X_L = 30\Omega, X_C = 30\Omega$$

2. The measured line voltages in 3-phase system are as follows:

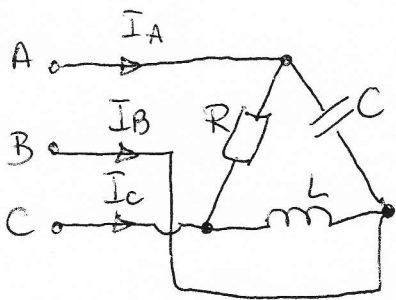
a)  $E_{AB} = 2000V, E_{BC} = 1000V, E_{CA} = 2000V$

b)  $E_{AB} = 100, E_{BC} = 200, E_{CA} = 300V$

Calculate the symmetrical components (analytical & graphical method)

3. Calculate symmetrical components of the line currents

a)



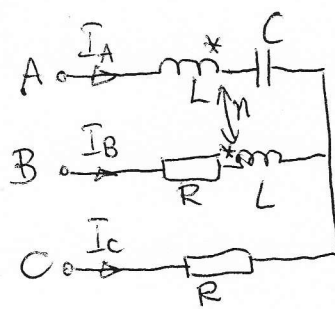
$$|U_{ph}| = 1000V$$

$$R = 10\Omega$$

$$X_L = 10\Omega$$

$$X_C = 5\Omega$$

b)



$$|U_{ph}| = 1000V$$

$$R = 100\Omega$$

$$X_L = 100\Omega$$

$$X_M = 50\Omega$$

$$X_C = 150\Omega$$