

$$P, R, X_L = ?$$

$$I = 32 \text{ A}$$

$$I_1 = 19 \text{ A}$$

$$I_2 = 18 \text{ A}$$

$$R_1 = 6 \Omega$$

$$I^2 = I_2^2 + 2 \cdot I_2 \cdot I_R + I_1^2$$

$$32^2 = 18^2 + 2 \cdot 18 \cdot I_R + 19^2$$

$$1024 = 324 + 36 I_R + 361$$

$$1024 = 36 I_R + 685$$

$$36 I_R = 339 / 36$$

$$I_R = 9,42 \text{ A}$$

$$36 I_R = 339,1:36$$

$$I_R = 9,42 \text{ A}$$

$$I_L = \sqrt{I_1^2 - I_R^2} = \sqrt{18^2 - 9,42^2} = 16,5 \text{ A}$$

$$U = I_2 \cdot R_1 = 18 \cdot 6 = 108 \text{ V}$$

$$R = \frac{U}{I_R} = \frac{108}{9,42} = 11,46 \Omega$$

$$X_L = \frac{U}{I_L} = \frac{108}{16,5} = 6,54 \Omega$$

$$P = I_2^2 \cdot R_1 + I_R^2 \cdot R = 18^2 \cdot 6 + 9,42^2 \cdot 11,46$$

$$= 1944 + 1016,92 = 2960,92 \text{ W}$$

$$Q = I_L^2 \cdot X_L = 16,5^2 \cdot 6,54$$

$$= 1780,51 \text{ VAR}$$