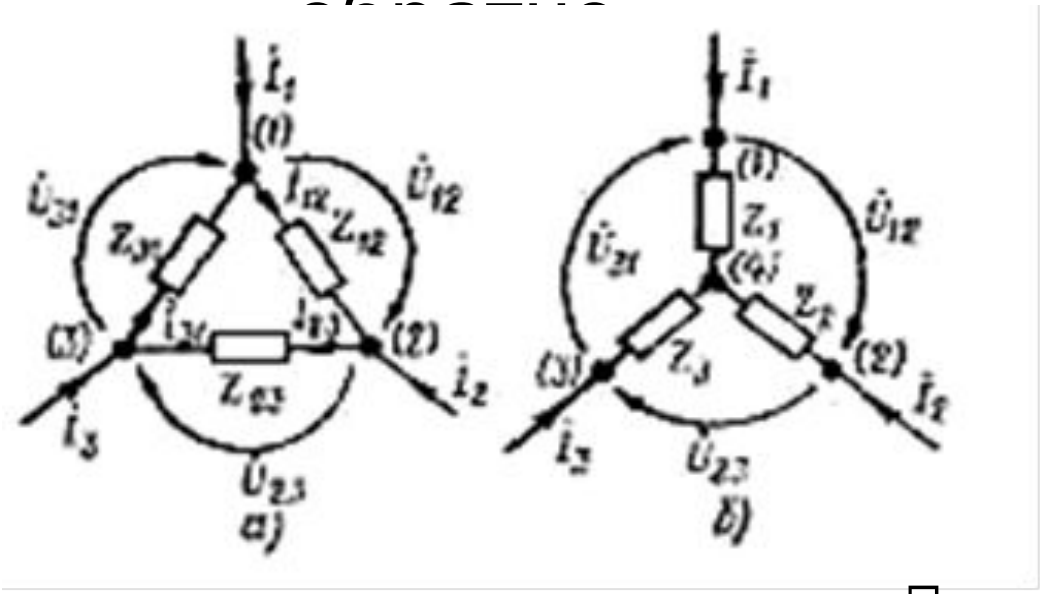
Эквивалентное преобразование треугольника сопротивлений в звезду и обратно



$$\dot{U}_{12} = Z_{12}\dot{I}_{12} = Z_{12}\left(Z_{31}\dot{I}_1 - Z_{23}\dot{I}_2\right)/\left(Z_{12}+Z_{23}+Z_{31}\right);$$

$$\dot{U}_{23} = Z_{23}\dot{I}_{23} = Z_{23}\left(Z_{12}\dot{I}_2 - Z_{31}\dot{I}_3\right)/\left(Z_{12}+Z_{23}+Z_{31}\right).$$

$$\dot{U}_{12} = Z_1\dot{I}_1 - Z_2\dot{I}_2;$$

$$\dot{U}_{23} = Z_2\dot{I}_2 - Z_3\dot{I}_3.$$

$$\frac{Z_{12}Z_{31}}{Z_{12}+Z_{23}+Z_{31}}\dot{I}_1 - \frac{Z_{12}Z_{23}}{Z_{12}+Z_{23}+Z_{31}}\dot{I}_2 = Z_1\dot{I}_1 - Z_2\dot{I}_2;$$

$$\frac{Z_{23}Z_{12}}{Z_{12}+Z_{23}+Z_{31}}\dot{I}_2 - \frac{Z_{23}Z_{31}}{Z_{12}+Z_{23}+Z_{31}}\dot{I}_3 = Z_2\dot{I}_2 - Z_3\dot{I}_3.$$