Пример расчета для опыта №1.

$j := \sqrt{-1} = i$

$Ea := 164 \cdot \exp(j \cdot 0) = 164$

$Eb := 164 \cdot \exp(j \cdot 120) = 133,5257 + 95,2202 \cdot i$

$Ec := 164 \cdot \exp(j \cdot (-120)) = 133,5257 - 95,2202 \cdot i$

$Ra := 45 \qquad La := 0,281$

$Rb := 45 \qquad Lb := 0,281$

$Rc := 45 \qquad Lc := 0,281$

$f := 60$

$\omega := 2 \cdot \pi \cdot f = 376,9911$

$Za := \sqrt{\left(Ra^2 + (\omega \cdot La)^2\right)} = 115,0961$

$Zb := \sqrt{\left(Rb^2 + (\omega \cdot Lb)^2\right)} = 115,0961$

$Zc := \sqrt{\left(Rc^2 + (\omega \cdot Lc)^2\right)} = 115,0961$

$\varphi a := \mathrm{arctg}\left(\omega \cdot \dfrac{La}{Ra}\right) = 1,1691$

$\varphi b := \mathrm{arctg}\left(\omega \cdot \dfrac{Lb}{Rb}\right) = 1,1691$

$\varphi c := \mathrm{arctg}\left(\omega \cdot \dfrac{Lc}{Rc}\right) = 1,1691$

$Ya := \dfrac{1}{Za} = 0,0087$

$Yb := \dfrac{1}{Zb} = 0,0087$

$Yc := \dfrac{1}{Zc} = 0,0087$

$Ua := Ea = 164$

$Ub := Eb = 133,5257 + 95,2202 \cdot i$

$Uc := Ec = 133,5257 - 95,2202 \cdot i$

$ya := Ya \cdot \exp(j \cdot \varphi a) = 0,0034 + 0,008 \cdot i$

$yb := Yb \cdot \exp(j \cdot \varphi b) = 0,0034 + 0,008 \cdot i$

$yc := Yc \cdot \exp(j \cdot \varphi c) = 0,0034 + 0,008 \cdot i$

$|Ua| = 164$

$|Ub| = 164$

$|Uc| = 164$

$Ia := Ua \cdot ya = 0,5571 + 1,3115 \cdot i$

$Ib := Ub \cdot yb = -0,3079 + 1,3912 \cdot i$

$Ic := Uc \cdot yc = 1,215 + 0,7443 \cdot i$

$|Ia| = 1,4249 \qquad |Ic| = 1,4249 \qquad |Ib| = 1,4249$

$Pa := Ia \cdot Ua \cdot \cos\left(\mathrm{arctg}\left(\omega \cdot \dfrac{La}{Ra}\right)\right) = 35,7216 + 84,0922 \cdot i$

$Pb := Ib \cdot Ub \cdot \cos\left(\mathrm{arctg}\left(\omega \cdot \dfrac{Lb}{Rb}\right)\right) = -67,8671 + 61,1684 \cdot i$

$Pc := Ic \cdot Uc \cdot \cos\left(\mathrm{arctg}\left(\omega \cdot \dfrac{Lc}{Rc}\right)\right) = 91,1419 - 6,3771 \cdot i$

$|Pa| = 91,3648 \qquad |Pc| = 91,3648 \qquad |Pb| = 91,3648$