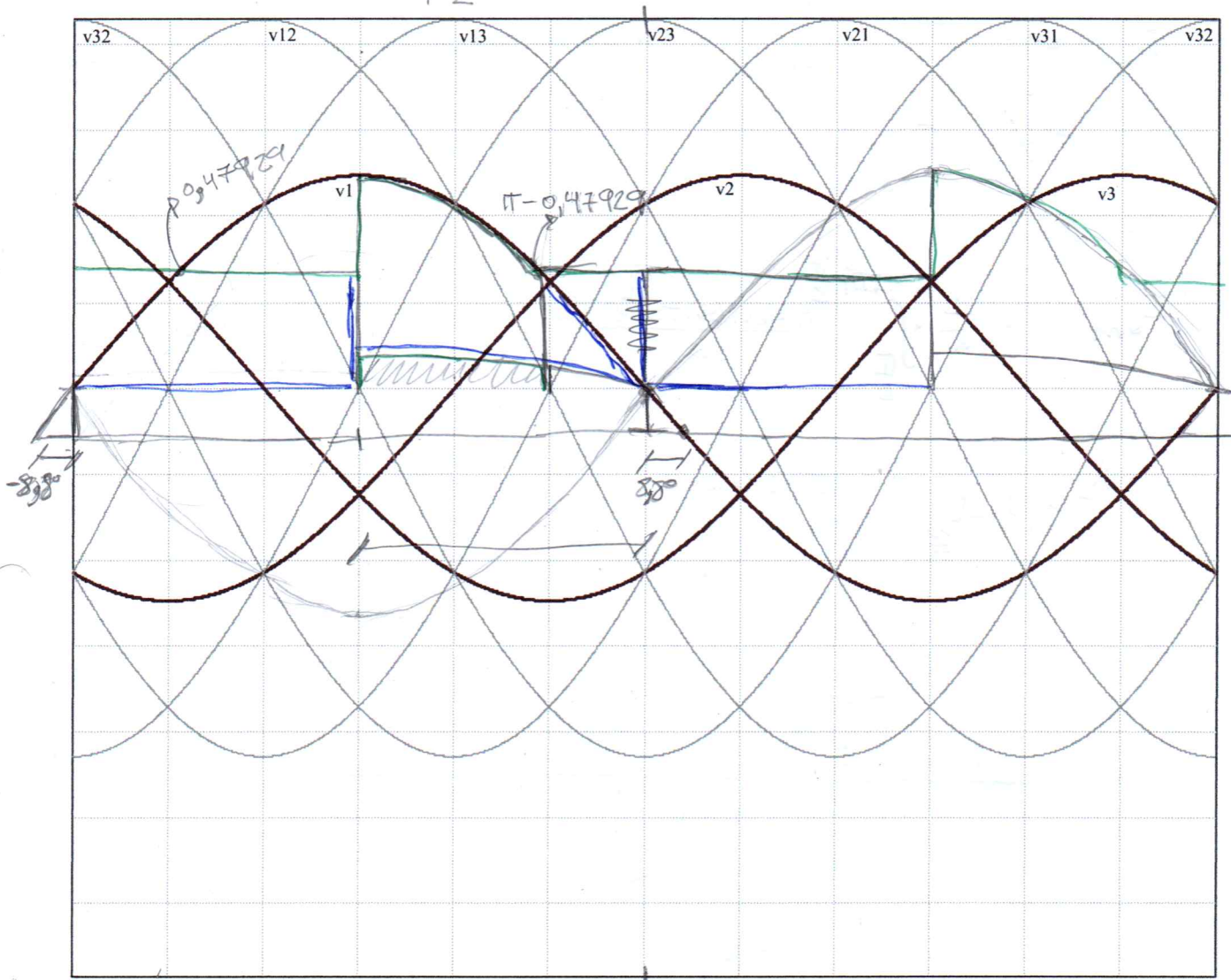


P 2



i) $R=10\Omega$ - circuito resistivo

$$A = \sqrt{2} \cdot 230 ; B = \frac{\sqrt{2} \cdot 230}{10}$$

$$V_{\text{méd}} = 2 \cdot \frac{1}{\pi} \cdot \int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} A \cdot \sin \theta \, d\theta = 103,5 \text{ [V]}$$

$$I_{\text{méd}} = 2 \cdot \frac{1}{\pi} \int_{-\frac{\pi}{2}}^{\pi} B \cdot \sin \theta \, d\theta = 10,35 \text{ [A]}$$

$$P_0 = 2 \cdot \frac{1}{\pi} \int_{-\frac{\pi}{2}}^{\pi} A \sin(\theta) \times B \sin(\theta) = 2645 \text{ [W]}$$

ii) $R=10\Omega$; $E=150\text{V}$

$$K_{150\text{VOLT}} = 0,47929 \text{ rad.}$$

$$V_{\text{méd}} = \frac{1}{\pi} \cdot \int_0^{\frac{\pi}{2}} 150 \, d\theta + \frac{1}{\pi} \cdot \int_{\frac{\pi}{2}}^{\pi - 0,47929} A \sin(\theta) \, d\theta + \frac{1}{\pi} \cdot \int_{\pi - 0,47929}^{\pi} 150 \, d\theta ; T = \pi$$

$$= 189,7448$$

$$I_{\text{méd}} = \frac{1}{\pi} \int_{\frac{\pi}{2}}^{\pi - 0,47929} \frac{V - E}{10} = 3,97545 \text{ [A]} ; V = A \cdot \sin(\theta)$$

$$P = \frac{1}{\pi} \int_{\frac{\pi}{2}}^{\pi - 0,47929} A \cdot \sin \theta \times \frac{V - E}{10} \, d\theta = 1148,905$$