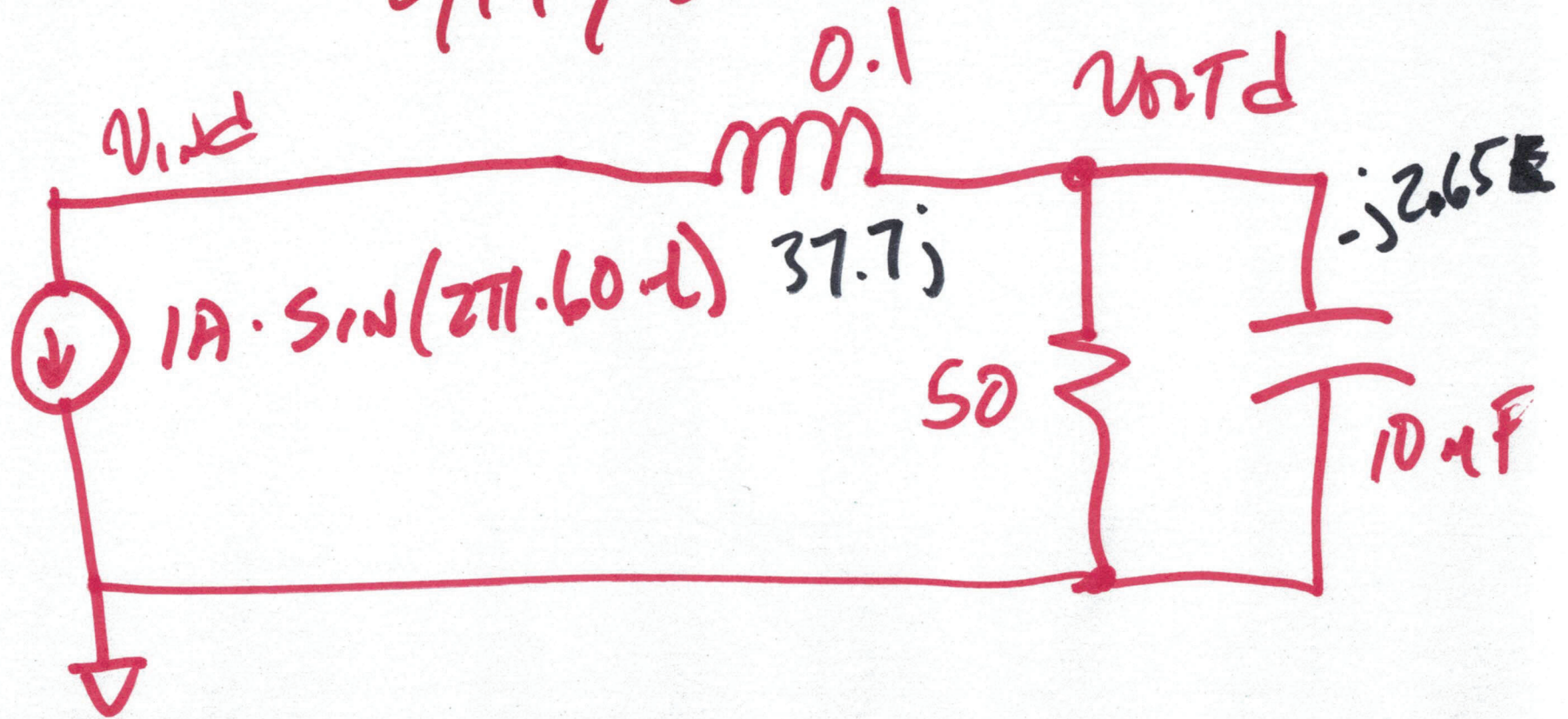
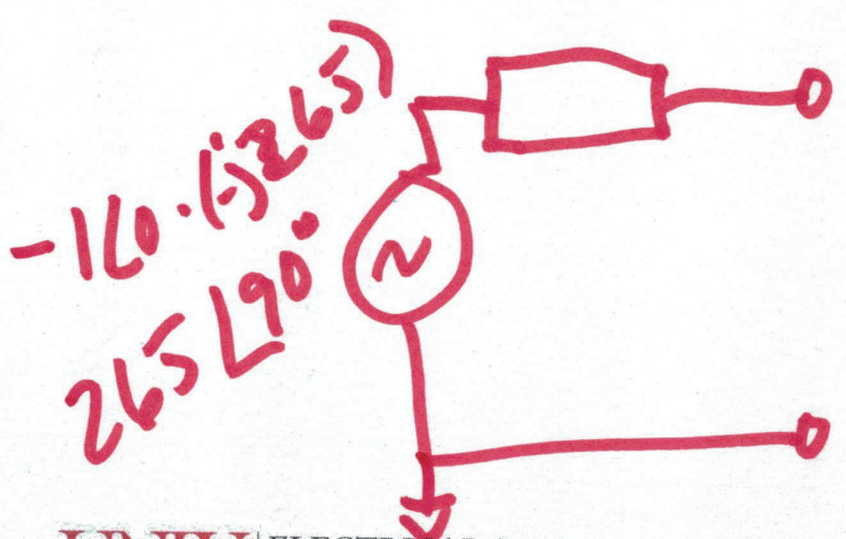
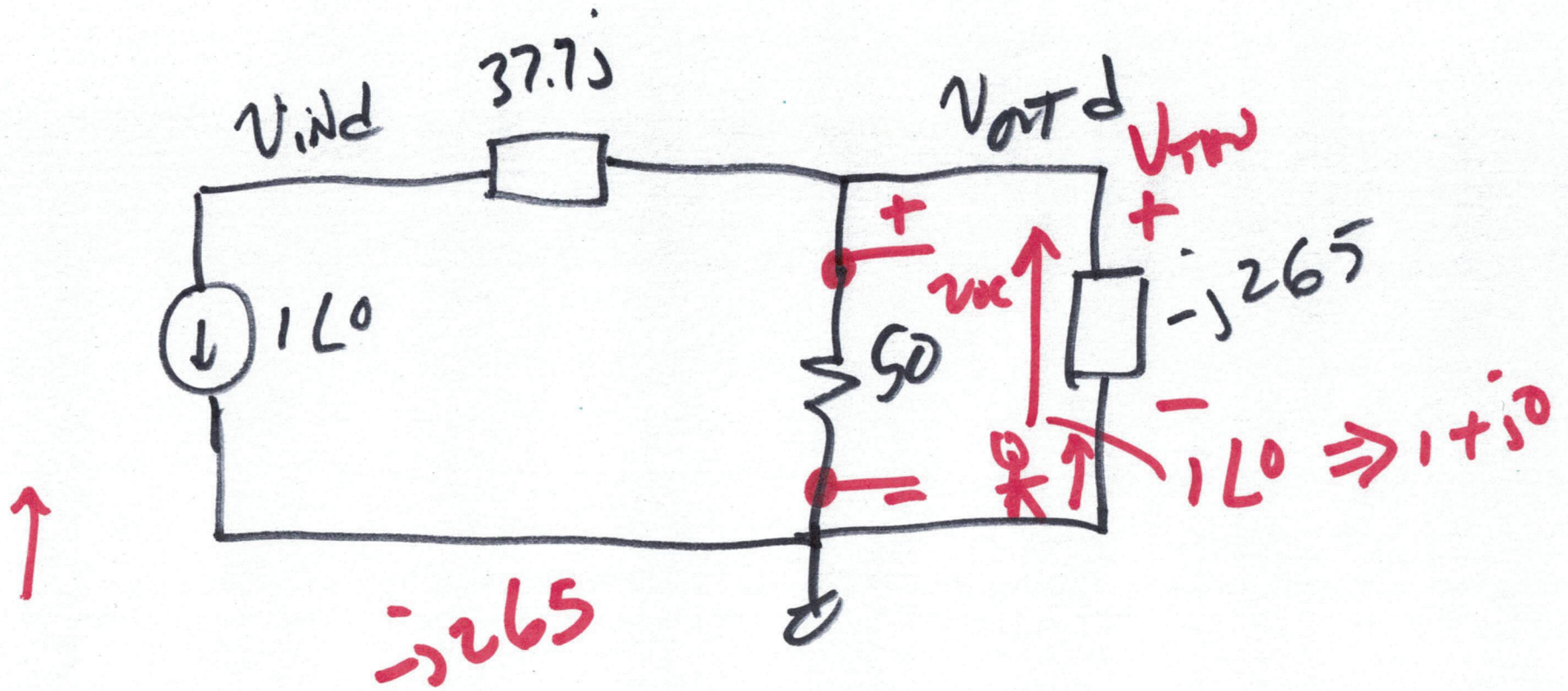


EE 220 Circuits II

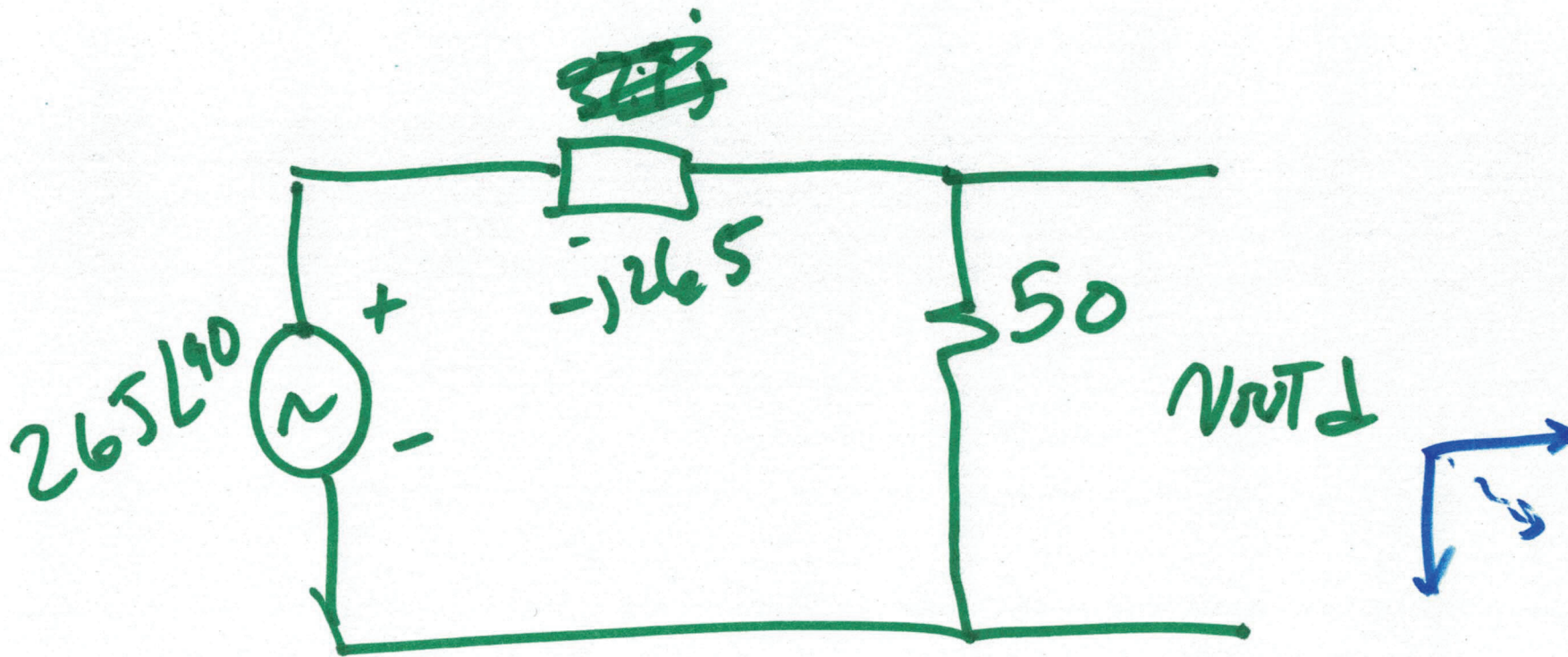
Lecture 8

2/17/2021





2)



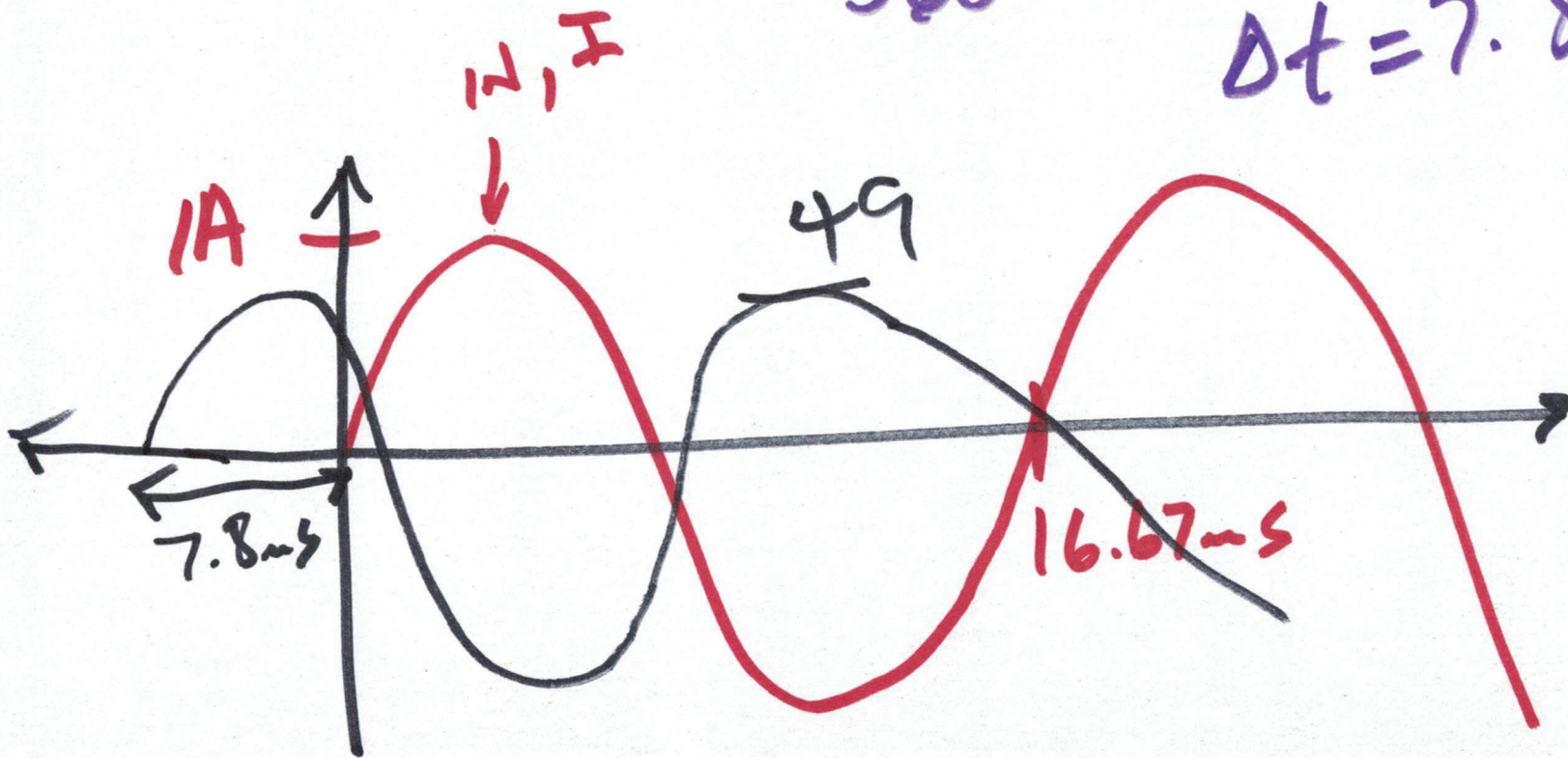
$$\begin{aligned}
 V_{oc} &= 265 \angle 90^\circ \cdot \frac{50}{50 + (-j265)} \\
 &= \frac{13250 \angle 90^\circ}{270 \angle -79^\circ} = 49 \angle 169^\circ
 \end{aligned}$$

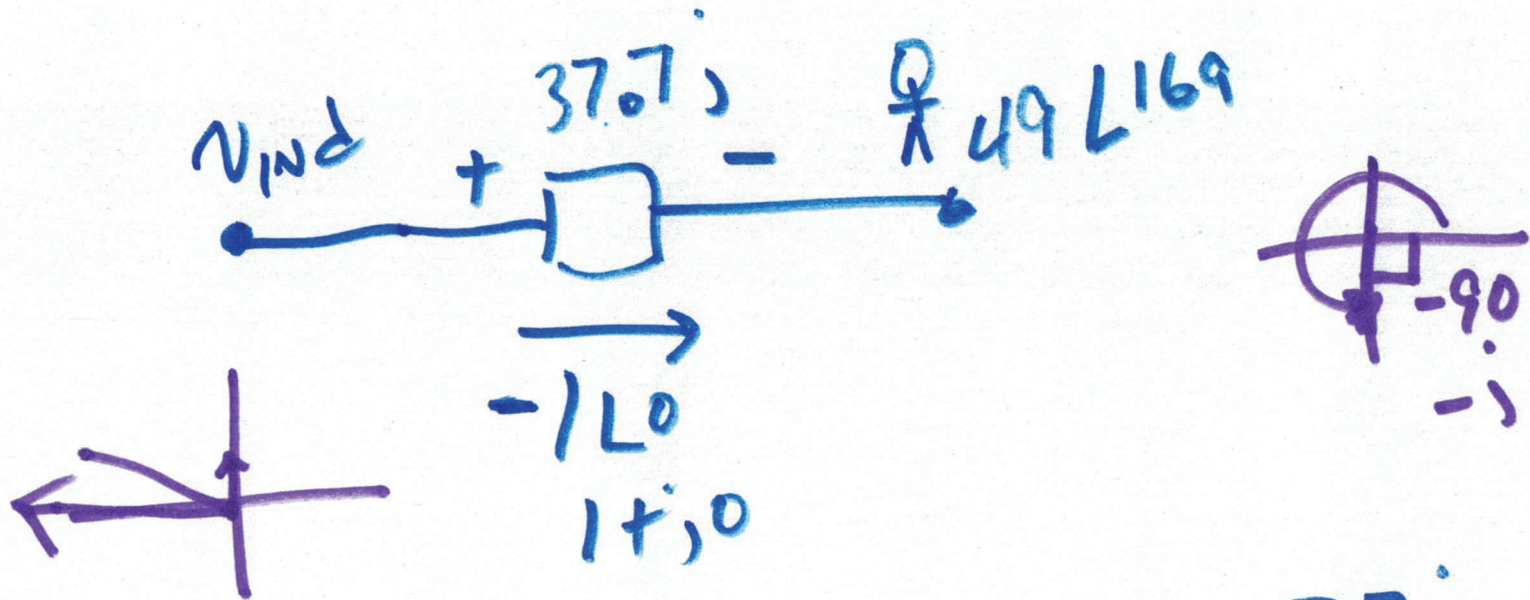
3)

$$v_{RTD} = 49V \cdot \sin(2\pi \cdot 60 \cdot t + 169)$$

$$\Delta t = \frac{169}{360} \cdot 16.67 \text{ ms}$$

$$\Delta t = 7.8 \text{ ms}$$



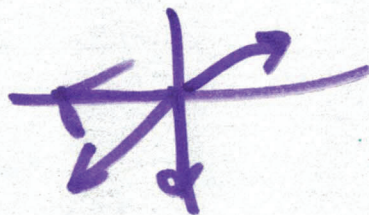


$$v_{ind} = 49 \angle 169^\circ + \frac{-120^\circ \cdot 37.7j}{-37.7j}$$

$$-48 + j9.34$$

$$v_{ind} = -48 - 28.36j$$

$$v_{ind} = 55.8 \angle 210^\circ$$



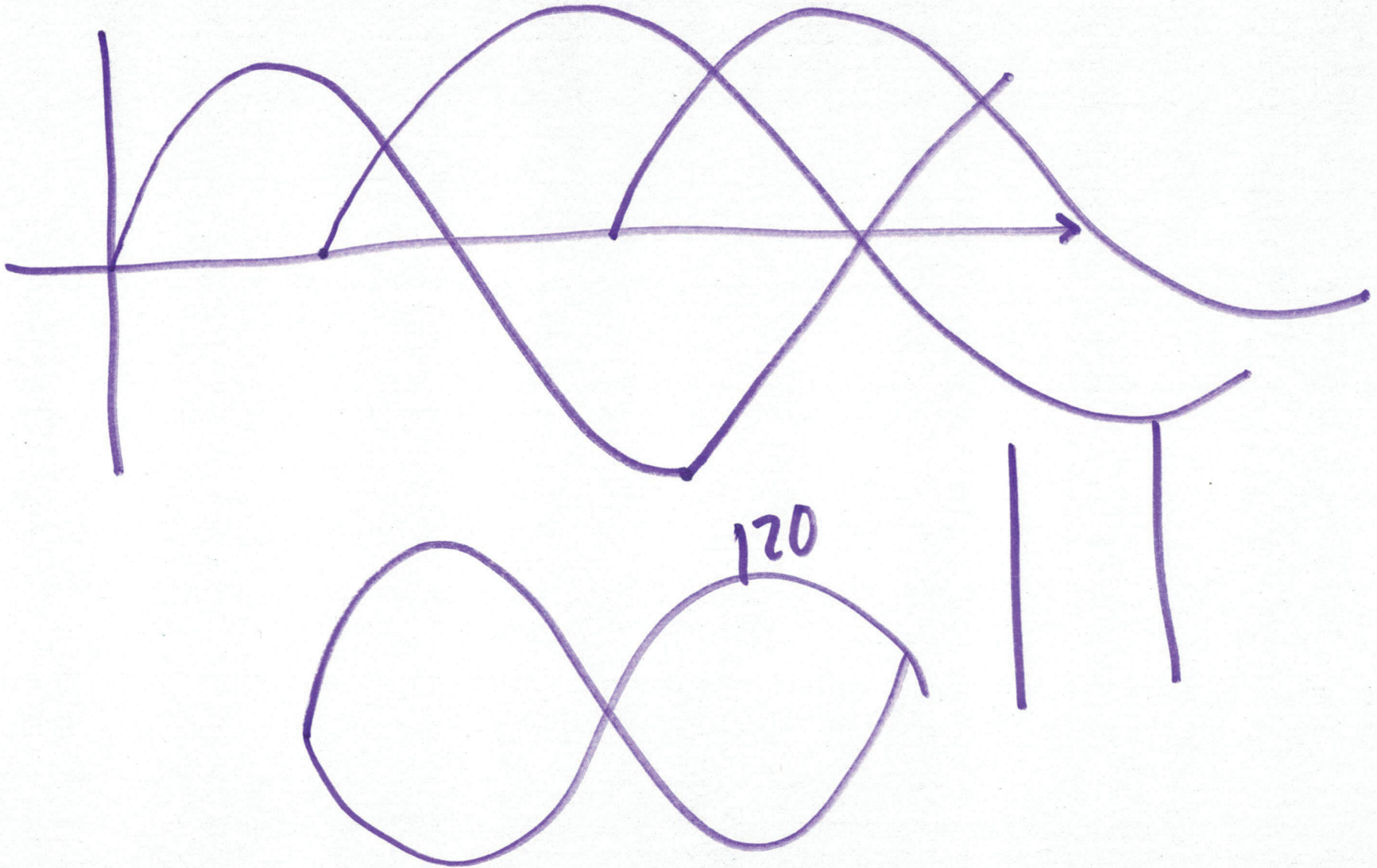
$$v_{ind} = 55.8 \angle 210^\circ$$

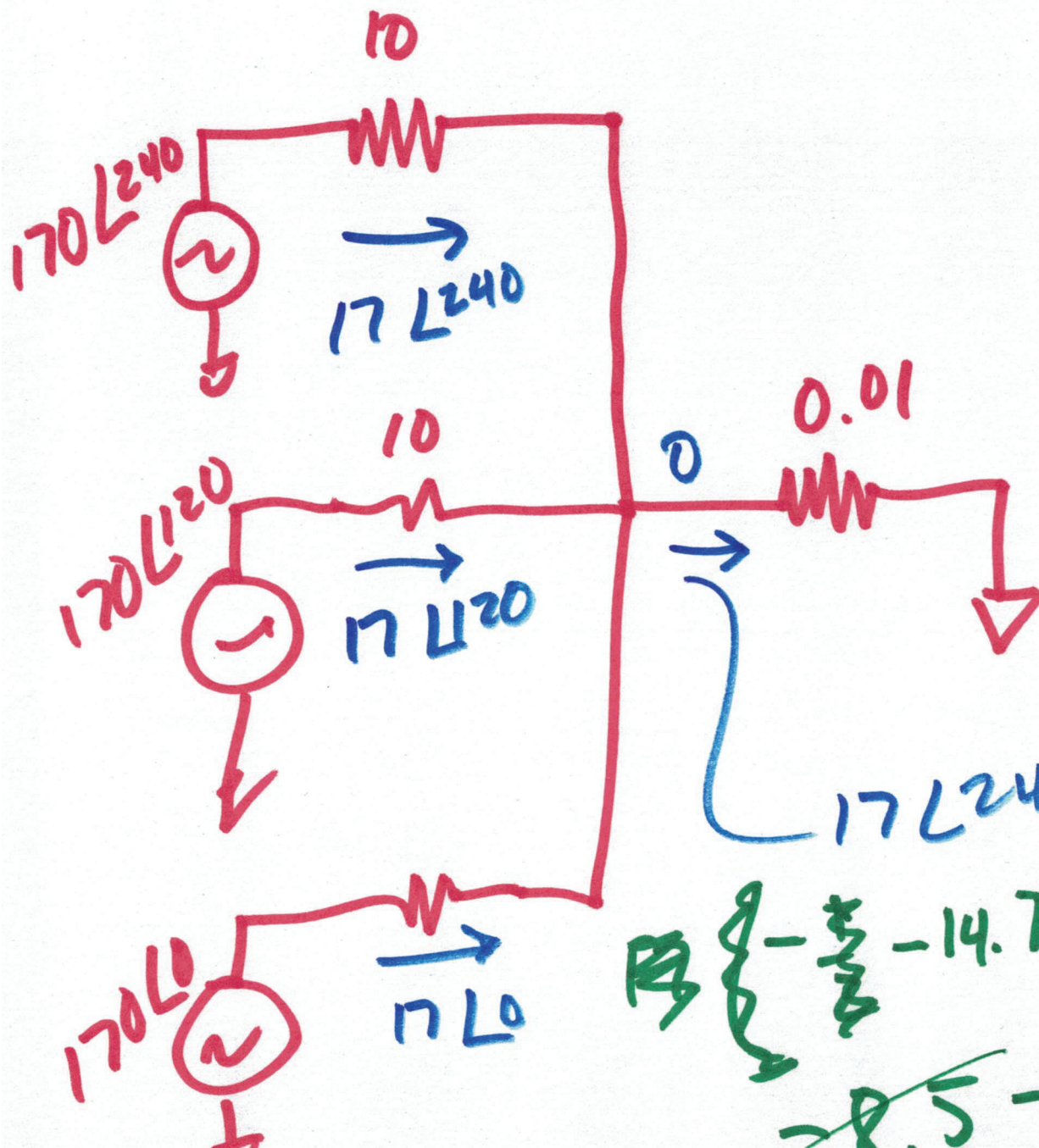
$$v_{ind} = 55.8 \sin(2\pi \cdot 60 \cdot t + 210)$$

$$\frac{210}{360} \cdot 16.67 \text{ ms} = \Delta t$$
$$= 9.7 \text{ ms}$$

6)

3-phase





$17\angle 240 + 17\angle 120 + 17\angle 0$
 $\rightarrow -8.5 - 14.7j$
 ~~$-8.5 - 14.7j + -8.5 + 14.7j + 17 + j0$~~

8)