

This math is needed to analyze linear circuits (electronic and otherwise)!

1. Redo practice problem B.1 in Alexander and Sadiku, 5h Edition. Changes: $z_1 = 4 - j3$, $z_2 = 4 + j11$. Other values from book.
2. Redo practice problem B.2 in Alexander and Sadiku, 5h Edition. Changes: (a) $-7\angle 200^\circ$, (c) $9e^{-j25^\circ}$.
3. Redo practice problem B.4 in Alexander and Sadiku, 5h Edition. Change: (a) $3 \rightarrow 2$.
4. Redo practice problem B.5 in Alexander and Sadiku, 5h Edition for $A = 2 - j4$.
5. Redo practice problem 9.1 in Alexander and Sadiku, 5h Edition for $4 \sin(4\pi t - 60^\circ)$.
6. Redo practice problem 9.4 in Alexander and Sadiku, 5h Edition for $v = 6 \cos(3t + 40^\circ)$ and $i = -3 \sin(9t + 15^\circ)$.
7. Redo practice problem 9.6 in Alexander and Sadiku, 5h Edition for $v_1 = -5 \sin(\omega t - 60^\circ)$ V.
8. Redo practice problem 9.8 in Alexander and Sadiku, 5h Edition for $v = 8 \cos(\omega t - 60^\circ)$ V and $C = 20 \mu\text{F}$.
9. Shown below is the voltage and current of some circuit element.
 - a) Find $v(t)$ and $i(t)$.
 - b) Express these as phasors V and I .
 - c) Do these waveforms correspond to an inductor or a capacitor? What is the value of the inductance/capacitance?

