3.9) \( V_1 = 16.8 \, \text{V}, \quad V_2 = 30.0 \, \text{V}, \quad V_3 = 2.4 \, \text{V}, \quad I_x = 4.6 \, \text{A} \)

7.32) \( v_{ab}(t) = 0.3849 \cos(300t + 173.6^\circ) \, \text{V} \)

7.35) \( Z = 1.194 - j0.0972 = (1.198 \, \Omega \angle -4.656^\circ) \)

7.57) \( i_x(t) = 0.1544 \cos(10^5t - 36^\circ) \, \text{A} \)

7.70) \( Z = (2 - j) \quad \Omega = (2.235 \, \Omega \angle -26.55^\circ) \)

3.32) \( V_x = 4 \, \text{V} \)

7.14)
a) \( |z|^2 = 100 \)

b) \( z^2 = 100 \angle -73.74^\circ \)

c) \( \frac{1}{z} = 0.1 \angle -143.1^\circ \)

d) \( z^{-3} = 0.001 \angle -69.39^\circ \)

e) \( \Re\left(\frac{1}{z^2}\right) = 0.0028 \)

f) \( \Im(z^*) = -6 \)

g) \( \Im((z^*)^2) = 96 \)

h) \( \Re((z^*)^{-1/2}) = 0.1 \)

8.7)
a) \( V_{AV} = 2 \, \text{V} \)

b) \( V_{rms} = \sqrt{\frac{72}{5}} = 6 \sqrt{\frac{2}{5}} = 3.795 \, \text{V} \)

8.26) \( P_{R_L} = 0.4956 \, \text{W} \)

8.29) \( P_{R_L} = 557.8 \, \text{W} \)