Example Problem

Find $v_L(t)$ for $v_s(t) = 170\cos(2\pi 60t)$ and for $R_s = 10 \, \Omega$, $N = 0.1$, and $R_L = 50 \, \Omega$. 
Resonance Example

\[ v_\text{in}(t) = 10\sin(\omega t) \] and \( \omega = 2\pi 100 \text{ kHz}, \]
\( R = 10 \, \Omega, \, L = 10 \, \mu\text{H}, \) and \( C = 253 \, \text{nF} \)

Phasor Superposition

\[ v_\text{in}(t) = 10\sin(\omega t) + 10\sin(2\omega t) + 10\sin(0.5\omega t) \] and \( \omega = 2\pi 100 \text{ kHz}, \)
\( R = 10 \, \Omega, \, L = 10 \, \mu\text{H}, \) and \( C = 253 \, \text{nF} \)
Example: WPT Problem