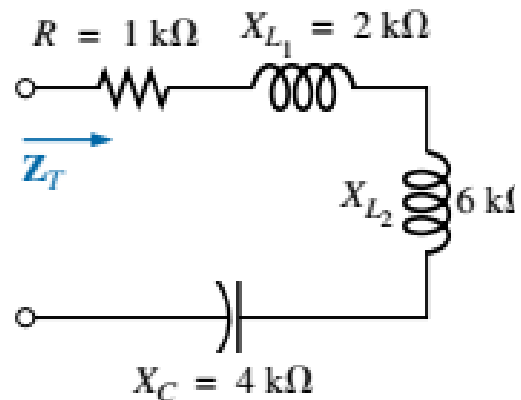


ICP Set 1 – Impedance Diagram

1 - Find Z_T (in rectangular form) for:



$$\begin{aligned}
 \vec{Z}_T &= R + jX_{L1} + jX_{L2} - jX_C \\
 &= 1000\Omega + j(8000\Omega) - j4000\Omega \\
 \boxed{\vec{Z}_T &= (1000 + j4000)\Omega}
 \end{aligned}$$

2 - Express your answer in polar form (angle in degrees):

$$R \rightarrow P \text{ YIELDS : } \boxed{4,123\Omega \angle 75.96^\circ}$$

3 - Draw the impedance diagram for the circuit shown:

