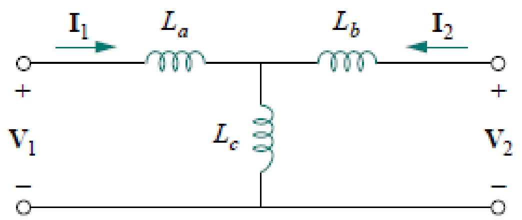
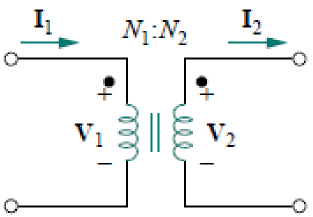
Formulário

$z = r\angle\phi = re^{j\phi}$	$z = x + jy = r\angle\phi = r(\cos\phi + j\sin\phi)$		
$i(t) = C\dfrac{du}{dt}$	$u(t) = L\dfrac{di}{dt}$	$V_{\text{rms}} = \dfrac{V_m}{\sqrt{2}}$	
$S = V_{\text{rms}} I_{\text{rms}}$		$P = V_{\text{rms}} I_{\text{rms}} \cos(\theta_v - \theta_i) = S\cos(\theta_v - \theta_i)$	$\mathbf{S} = \dfrac{1}{2}\mathbf{V}\mathbf{I}^*$
	$\text{pf} = \cos(\theta_v - \theta_i)$	$\mathbf{S} = I_{\text{rms}}^2 (R + jX) = P + jQ$	
	$P = V_{\text{rms}} I_{\text{rms}} \cos(\theta_v - \theta_i),$	$Q = V_{\text{rms}} I_{\text{rms}} \sin(\theta_v - \theta_i)$	
$M = k\sqrt{L_1 L_2}$	$\mathbf{Z}_{\text{in}} = \dfrac{\mathbf{V}}{\mathbf{I}_1} = R_1 + j\omega L_1 + \dfrac{\omega^2 M^2}{R_2 + j\omega L_2 + \mathbf{Z}_L}$		
	 $\dfrac{\mathbf{V}_2}{\mathbf{V}_1} = \dfrac{N_2}{N_1}$ $\dfrac{\mathbf{I}_2}{\mathbf{I}_1} = \dfrac{N_1}{N_2}$	La=L1-M Lb=L2-M Lc= M	

<table>
<tr>
<td>$B = \frac{\phi}{a}$ Wb/m^2</td>
<td>$H = \frac{B}{\mu_0\,\mu_r} = \frac{\phi}{a\,\mu_0\,\mu_r}$ AT/m</td>
<td>$Hl = NI$ or $\frac{\phi}{a\,\mu_0\,\mu_r} \times l = NI$ (</td>
<td>$S = \frac{l}{a\,\mu_0\,\mu_r}$</td>
</tr>
<tr>
<td>$e = N\frac{d\phi}{dt}$</td>
<td>$T = 2F_r \sin\,\theta$</td>
<td>$\omega T_e = \omega T_m - \omega T_f$</td>
<td>$ei = \omega T_e$</td>
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<tr>
<td>$E_g = \frac{PZ\phi N}{60A}$ volt.</td>
<td>$EI_a = \omega T_e$
$\frac{\phi\, ZNP}{60A} \times I_a = \frac{2\pi N}{60} \times T_e$</td>
<td>Terminal voltage, $V = E_g - I_a\, R_a$</td>
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<td></td>
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<table>
<tr><th>Element</th><th>Time domain</th><th>Frequency domain</th></tr>
<tr><td>R</td><td>$v = Ri$</td><td>$\mathbf{V} = R\mathbf{I}$</td></tr>
<tr><td>L</td><td>$v = L\frac{di}{dt}$</td><td>$\mathbf{V} = j\omega L\mathbf{I}$</td></tr>
<tr><td>C</td><td>$i = C\frac{dv}{dt}$</td><td>$\mathbf{V} = \frac{\mathbf{I}}{j\omega C}$</td></tr>
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TABLE 9.1 Sinusoid-phasor transformation.
<table>
<tr><th>Time-domain representation</th><th>Phasor-domain representa</th></tr>
<tr><td>$V_m \cos(\omega t + \phi)$</td><td>$V_m \angle \phi$</td></tr>
<tr><td>$V_m \sin(\omega t + \phi)$</td><td>$V_m \angle \phi - 90^\circ$</td></tr>
<tr><td>$I_m \cos(\omega t + \theta)$</td><td>$I_m \angle \theta$</td></tr>
<tr><td>$I_m \sin(\omega t + \theta)$</td><td>$I_m \angle \theta - 90^\circ$</td></tr>
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