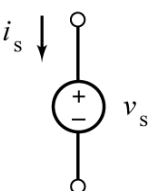
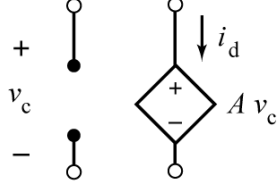
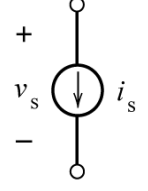
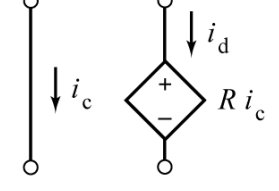
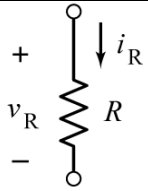
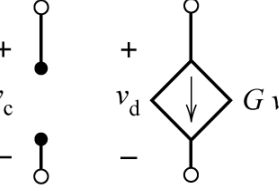
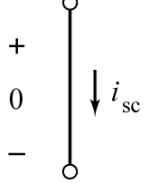
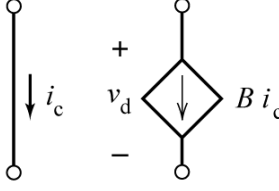
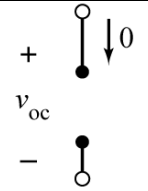
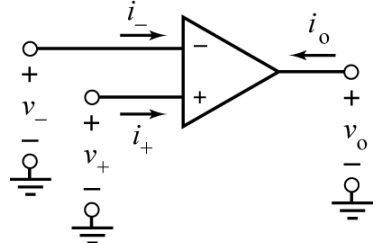
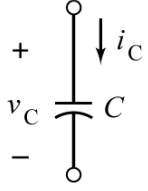
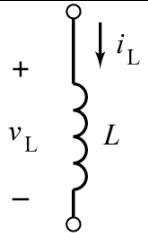


1.	$v_1 = 4 \text{ V}$, $v_2 = 4 \text{ V}$, $v_3 = 8 \text{ V}$ and $v_4 = -8 \text{ V}$ $i_1 = 1 \text{ A}$, $i_2 = -1 \text{ A}$, $i_3 = -3 \text{ A}$ and $i_4 = 2 \text{ A}$
2.	$v_1 = 12 \text{ V}$, $v_2 = -4.8 \text{ V}$, $v_3 = 7.2 \text{ V}$ and $v_4 = -7.2 \text{ V}$ $i_1 = -1.2 \text{ A}$, $i_2 = 1.2 \text{ A}$, $i_3 = 0.72 \text{ A}$ and $i_4 = 0.48 \text{ A}$
3.	$v_1 = 6 \text{ V}$, $v_2 = -12 \text{ V}$, $v_3 = 6 \text{ V}$ and $v_4 = 6 \text{ V}$ $i_1 = 3 \text{ A}$, $i_2 = 3 \text{ A}$, $i_3 = 2 \text{ A}$ and $i_4 = -1 \text{ A}$
4.	$v_1 = 24 \text{ V}$, $v_2(t) = -19.2 - 8.4e^{-25t} \text{ V}$, $v_3(t) = 4.8 - 8.4e^{-25t} \text{ V}$ and $v_4(t) = -4.8 + 8.4e^{-25t} \text{ V}$ $i_1(t) = -0.48 - 0.21e^{-25t} \text{ A}$, $i_2(t) = 0.48 + 0.21e^{-25t} \text{ A}$, $i_3(t) = 0.48 - 0.84e^{-25t} \text{ A}$ and $i_4(t) = 1.05e^{-25t} \text{ A}$
5.	$v_1(t) = 24 \cos(25t) \text{ V}$, $v_2(t) = 21.73 \cos(25t - 173.7^\circ) \text{ V}$, $v_3(t) = 3.394 \cos(25t - 45^\circ) \text{ V}$ and $v_4(t) = 3.394 \cos(25t + 135^\circ) \text{ V}$ $i_1(t) = 0.5433 \cos(25t - 173.7^\circ) \text{ A}$, $i_2(t) = 0.5433 \cos(25t + 6.34^\circ) \text{ A}$, $i_3(t) = 0.3394 \cos(25t - 45^\circ) \text{ A}$ and $i_4(t) = 0.4243 \cos(25t - 135^\circ) \text{ A}$

Table 1.5-1 Power Received or Supplied by a Circuit Element

<p>The current and voltage reference directions adhere to the passive convention so</p> $p(t) = v(t)i(t)$ <p>is the power received by the circuit element.</p>	<p>The current and voltage reference directions do not adhere to the passive convention so</p> $p(t) = v(t)i(t)$ <p>is the power supplied by the circuit element.</p>

Linear Circuit Elements

Name	Symbol	Equation	Name	Symbol	Equation
Voltage Source		$v_s = v(t)$ $i_s = ?$	VCVS		$v_d = A v_c$ $i_d = ?$
Current Source		$i_s = i(t)$ $v_s = ?$	CCVS		$v_d = R i_c$ $i_d = ?$
Resistor		$v_R = R i_R$ $i_R = \frac{v_R}{R} = G v_R$	VCCS		$i_d = G v_c$ $v_d = ?$
Short Circuit		$v_{sc} = 0$ $i_{sc} = ?$	CCCS		$i_d = B i_c$ $v_d = ?$
Open Circuit		$i_{oc} = 0$ $v_{os} = ?$	Op Amp		$i_+ = 0$ $i_- = 0$ $v_- = v_+$ $v_o = ?$ $i_o = ?$
Capacitor		$v_C(t) = \frac{1}{C} \int_{-\infty}^t i_C d\tau$ $i_C = C \frac{dv_C}{dt}$			
Inductor		$i_L(t) = \frac{1}{L} \int_{-\infty}^t v_L d\tau$ $v_L = L \frac{di_L}{dt}$			