

Rectifier Tables: Monophasic Uncontrolled

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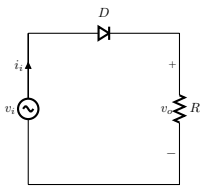
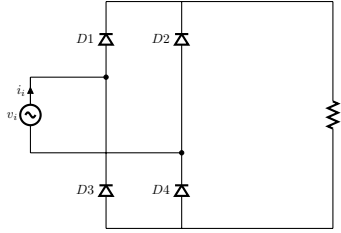
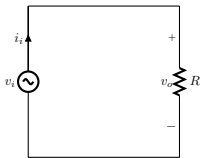
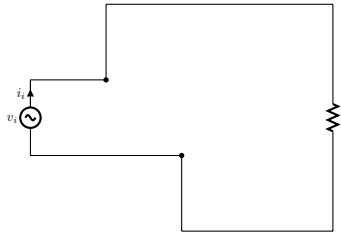
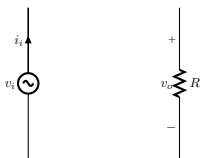
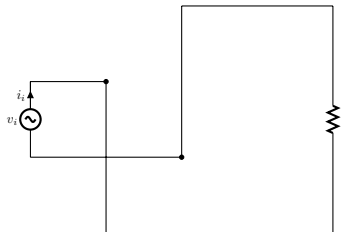
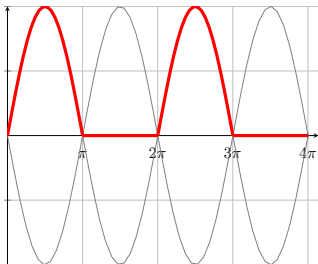
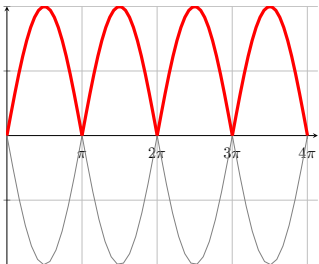
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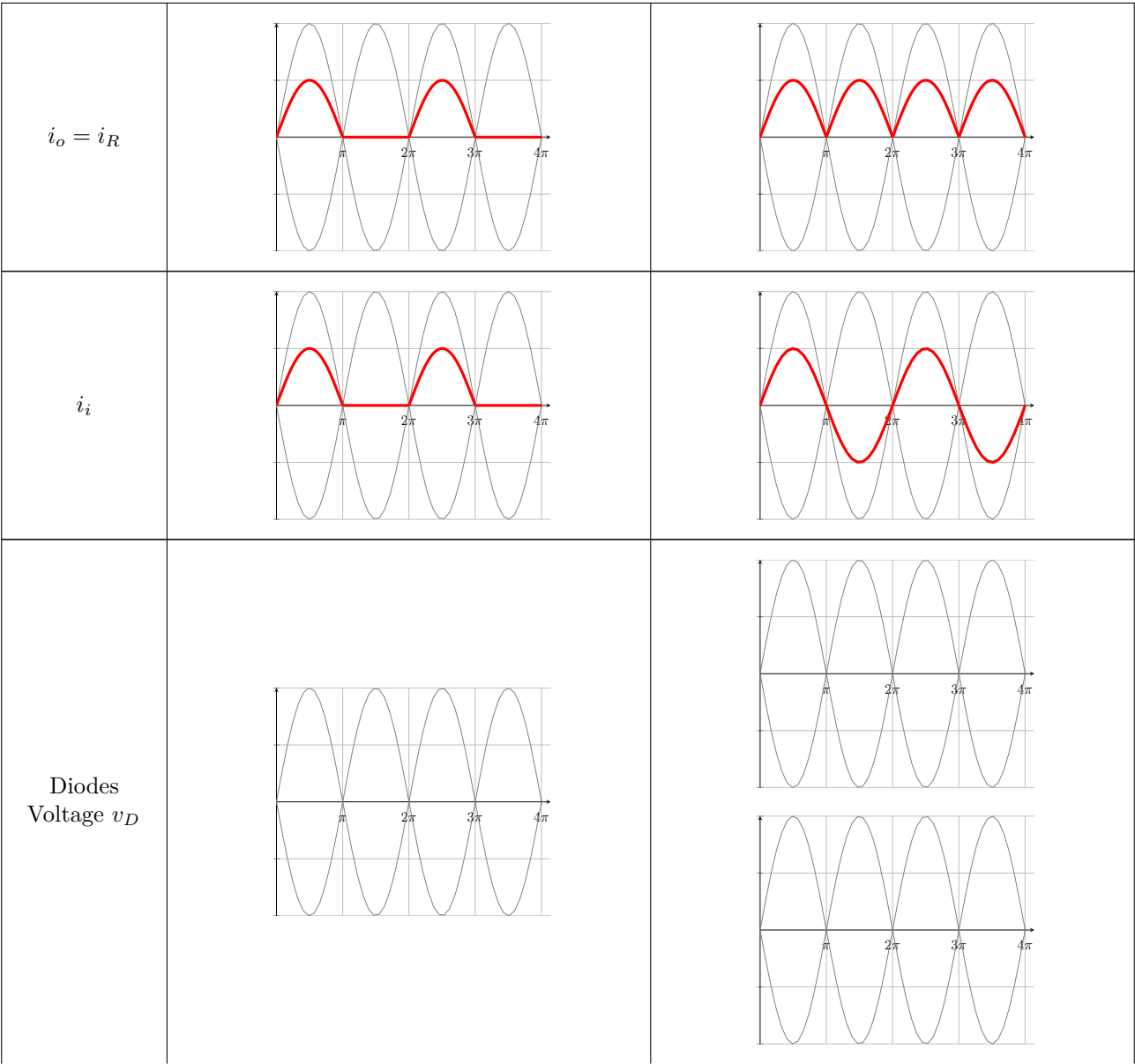
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1 Rectifier Tables

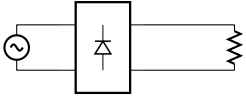
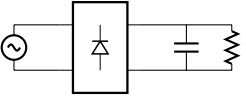
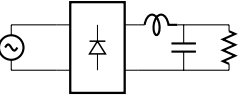
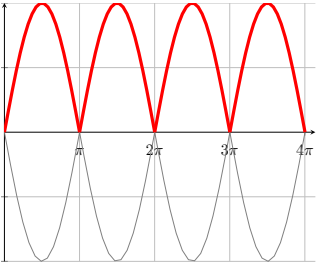
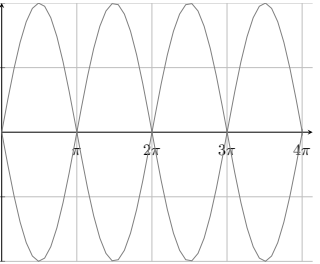
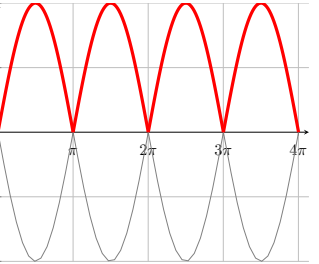
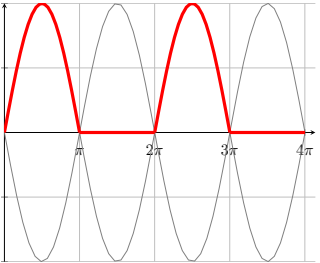
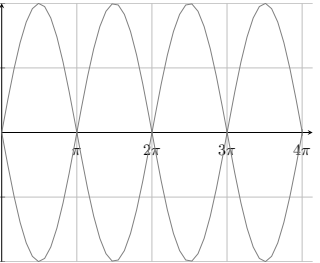
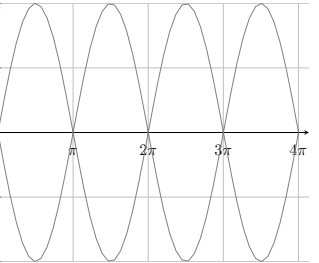
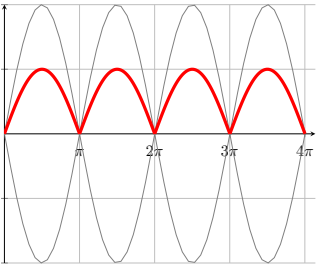
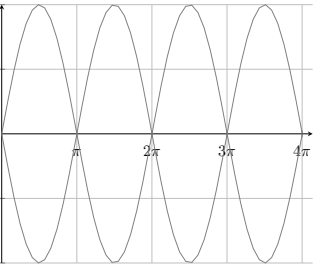
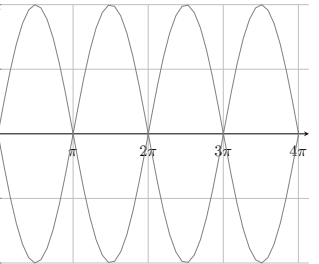
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1.1 Monophasic Uncontrolled Rectifiers with R load

What	Half Wave Rectifier	Full Wave Rectifier
Circuit Diagram		
$v_i > 0$ equivalent		
$v_i < 0$ equivalent		
Diode table		
v_o		
\bar{v}_o	$\bar{v}_o = \frac{V_{ip}}{\pi}$	$\bar{v}_o = \frac{2V_{ip}}{\pi}$



1.2 Monophasic Uncontrolled Full Wave Rectifier loads

What	R load	RC load	RLC load
Circuit Diagram			
v_o			
v_R			
\bar{v}_R	$\bar{v}_R = \frac{2}{\pi} V_{ip}$	$\bar{v}_R = V_{ip} - \frac{1}{2} \Delta v_R$	$\bar{v}_R = \frac{2}{\pi} V_{ip}$
v_R ripple	Not considered	Triangular approximation $\Delta v_R = \frac{V_{ip} T}{2RC}$	Considering only 1st harmonic $\Delta v_R = HV$
i_R			
i_o	