
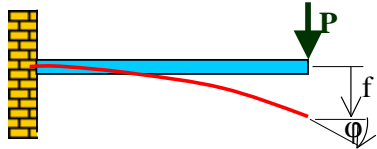
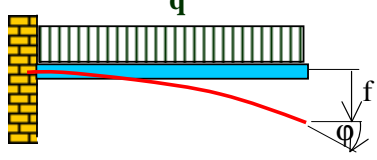
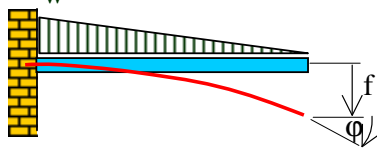
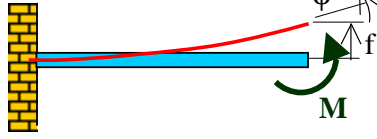
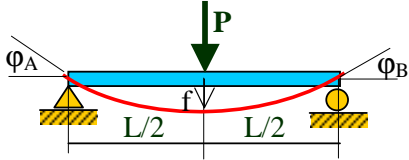
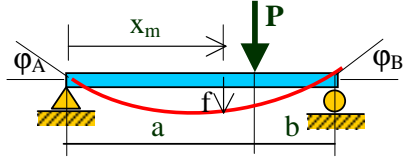
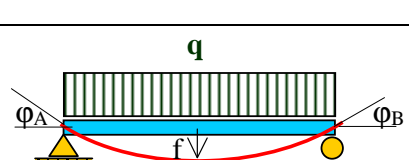
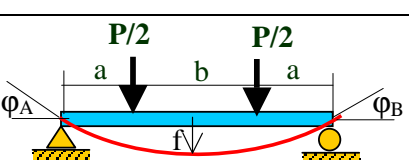
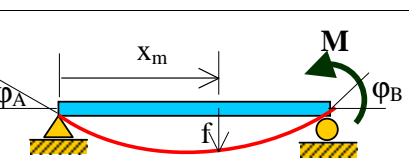


**APÊNDICE C-1** – Tabela de flechas e deflexões angulares para algumas vigas isostáticas.

Viga	Carregamento e Vinculação (comprimento L)	Deflexão angular na extremidade 	Flecha Máxima + ↑
1		$\phi = -PL^2 / 2EI$	$f = - PL^3 / 3 EI$
2		$\phi = -qL^3 / 6EI$	$f = - qL^4 / 8 EI$
3		$\phi = -wL^3 / 24EI$	$f = - w L^4 / 30 EI$
4		$\phi = + ML / EI$	$f = + ML^2 / 2 EI$
5		$\phi_A = -PL^2 / 16 EI$ $\phi_B = +PL^2 / 16 EI$	$f = - PL^3 / 48 EI$
6		$\phi_A = -Pb(L^2 - b^2) / 6 LEI$ $\phi_B = +Pa(L^2 - a^2) / 6 LEI$	$f = \frac{-Pb(L^2 - b^2)^{3/2}}{9\sqrt{3} LEI}$ para $x_m = \sqrt{(L^2 - b^2)}/3$
7		$\phi_A = - qL^3 / 24 EI$ $\phi_B = + qL^3 / 24 EI$	$f = - 5 q L^4 / 384 EI$
8		<i>a ser preenchido pelo estudante</i>	<i>a ser preenchido pelo estudante</i>
9		$\phi_A = - ML / 6 EI$ $\phi_B = + ML / 3 EI$	$f = - ML^2 / 9\sqrt{3} EI$ para $x_m = L / \sqrt{3}$

**APÊNDICE C-2 - Tabela de Reações Vinculares e flechas para algumas vigas hiperestáticas.**

Viga	Carregamento e Vinculação (comprimento L)	Reações Vinculares e Momentos Máximos	Flecha Máxima + ↑
1		$A = (11/16)P$ $B = (5/16)P$ $M = (3/16)PL$ $(M_{MAX})(+) = +(5/32)PL$ $(M_{MAX})(-) = -(3/16)PL$	$f = - 7PL^3 / 768 EI$
2		$A = (3/8)qL$ $B = (5/8)qL$ $M = qL^2/8$ $(M_{MAX})(+) = (9/128)qL^2$ $(M_{MAX})(-) = - qL^2/8$	$f = - qL^4 / 185 EI$
3		$A = B = (1/2)P$ $M = (1/8)PL$ $(M_{MAX})(+) = +(1/8)PL$ $(M_{MAX})(-) = -(1/8)PL$	$f = - PL^3 / 192 EI$
4		$A = B = (1/2)P$ $M = qL^2/12$ $(M_{MAX})(+) = + qL^2/24$ $(M_{MAX})(-) = - qL^2/12$	$f = - qL^4 / 384 EI$
5		$A = B = (5/32)P$ $C = (11/16)P$ $(M_{MAX})(+) = +(5/128)PL$ $(M_{MAX})(-) = -(3/64)PL$	a ser calculada pelo estudante <i>(observe a equivalência entre o trecho CB da viga 5 e o trecho AB da viga 1)</i>
6		$A = B = (3/16)qL$ $C = (5/8)qL$ $(M_{MAX})(+) = +(9qL^2/512)$ $(M_{MAX})(-) = - qL^2/32$	$f = - qL^4 / 2960 EI$
7		$A = B = (3/2)M/L$ $M_A = M_B = M/4$	$f = \pm M / 216 EI$ em $x = L/3$
8		$A = B = (12EI/L^3) \delta$ $M_A = M_B = (6EI/L^2) \delta$	$\delta \rightarrow$ recalque do apoio