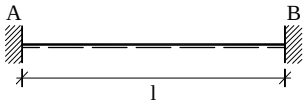
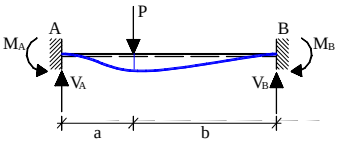
SOLUZIONI DI TRAVI ELEMENTARI VARIAMENTE CARICATE

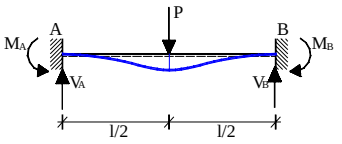
Travi con doppio incastro



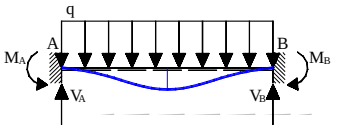
CARICHI ESTERNI



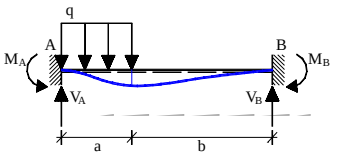
$$V_A = \frac{Pb^2}{l^3}(l+2a);\quad V_B = \frac{Pa^2}{l^3}(l+2b)$$
$$M_A = -\frac{Pab^2}{l^2};\quad M_B = \frac{Pa^2b}{l^2}$$



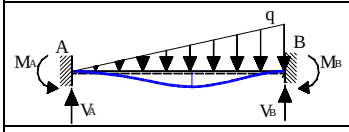
$$V_A = V_B = \frac{P}{2}$$
$$M_A = M_B = \frac{Pl}{8}$$



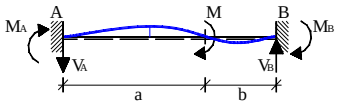
$$V_A = V_B = \frac{ql}{2}$$
$$M_A = M_B = \frac{ql^2}{12}$$



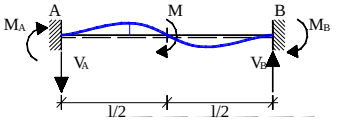
$$V_A = \frac{qa}{2}\left(2-\frac{2a^2}{l^2}+\frac{a^3}{l^3}\right);$$
$$V_B = \frac{qa^3}{2l^2}\left(2-\frac{a}{l}\right)$$
$$M_A = -qa^2\left(\frac{1}{2}-\frac{2a}{3l}+\frac{a^2}{4l^2}\right);$$
$$M_B = -qa^2\left(\frac{a}{3l}-\frac{a^2}{4l^2}\right)$$



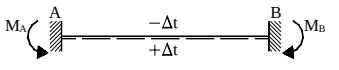
$$V_A = \frac{3}{20}ql;\quad V_B = \frac{7}{20}ql$$
$$M_A = \frac{1}{30}ql^2;\quad M_B = \frac{1}{20}ql^2$$



$$V_A = -V_B = -\frac{6Mab}{l^3}$$
$$M_A = M\frac{b}{l}\left(2-3\frac{b}{l}\right);$$
$$M_B = -M\frac{a}{l}\left(2-3\frac{a}{l}\right)$$

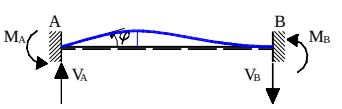


$$V_A = -V_B = \frac{3}{2}\frac{M}{l}$$
$$M_A = M_B = \frac{M}{4}$$



$$M_A = -M_B = \frac{\alpha\Delta tEJ}{h}$$

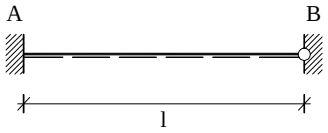
DISTORSIONI VINCOLARI



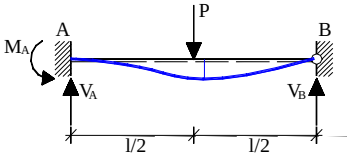
$$V_A = -V_B = \frac{6\varphi EJ}{l^2}$$
$$M_A = \frac{4\varphi EJ}{l};\quad M_B = \frac{2\varphi EJ}{l}$$

$$V_A = -V_B = \frac{12\Delta EJ}{l^3}$$
$$M_A = M_B = \frac{6\Delta EJ}{l^2}$$

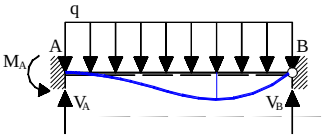
Travi con incastro e cerniera



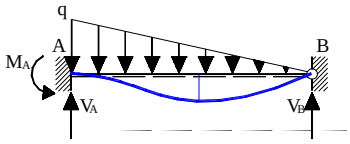
CARICHI ESTERNI



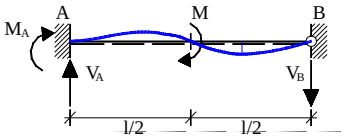
$$V_A = \frac{11}{16}P;\quad V_B = \frac{5}{16}P$$
$$M_A = \frac{3}{16}Pl$$



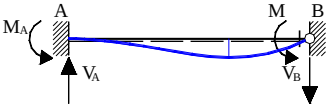
$$V_A = \frac{5}{8}ql;\quad V_B = \frac{3}{8}ql$$
$$M_A = \frac{ql^2}{8}$$



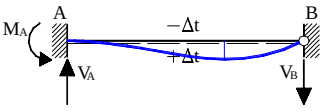
$$V_A = \frac{2}{5}ql;\quad V_B = \frac{ql}{10}$$
$$M_A = \frac{ql^2}{15}$$



$$V_A = -V_B = \frac{9}{8}\frac{M}{l}$$
$$M_A = \frac{M}{8}$$

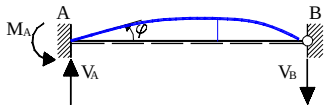


$$V_A = -V_B = \frac{3}{2}\frac{M}{l}$$
$$M_A = \frac{M}{2}$$

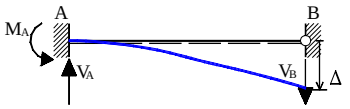


$$V_A = -V_B = \frac{3}{2}\frac{\alpha\Delta tEJ}{lh}$$
$$M_A = \frac{3}{2}\frac{\alpha\Delta tEJ}{h}$$

DISTORSIONI VINCOLARI

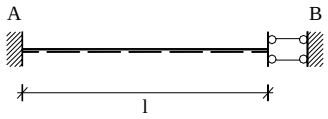
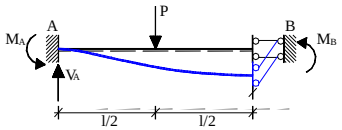
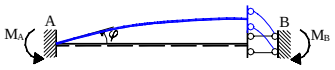
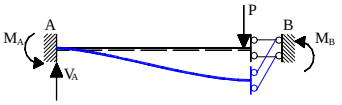
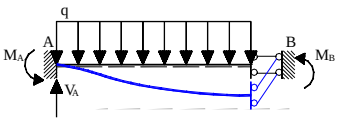
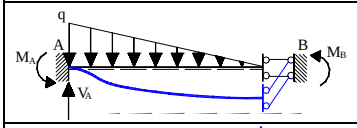
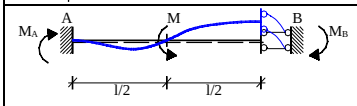
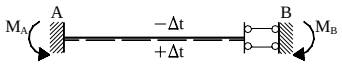


$$V_A = -V_B = \frac{3\varphi EJ}{l^2}$$
$$M_A = \frac{3\varphi EJ}{l}$$



$$V_A = -V_B = \frac{3\Delta EJ}{l^3}$$
$$M_A = \frac{3\Delta EJ}{l^2}$$

$$V_A = -V_B = \frac{3\Delta EJ}{l^3}$$
$$M_A = \frac{3\Delta EJ}{l^2}$$

Travi con incastro e doppio pendolo			
CARICHI ESTERNI		**DISTORSIONI VINCOLARI**	
	$V_A = P$ $M_A = \frac{3}{8}Pl$; $M_B = \frac{Pl}{8}$		$M_A = -M_B = \frac{\varphi EJ}{l}$
	$V_A = P$ $M_A = M_B = \frac{Pl}{2}$		
	$V_A = ql$ $M_A = \frac{ql^2}{3}$; $M_B = \frac{ql^2}{6}$		
	$V_A = \frac{ql}{2}$ $M_A = \frac{ql^2}{8}$; $M_B = \frac{ql^2}{24}$		
	$M_A = M_B = \frac{M}{2}$		
	$M_A = -M_B = \frac{\alpha \Delta t EJ}{h}$		