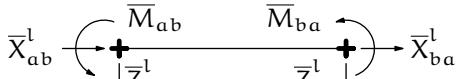
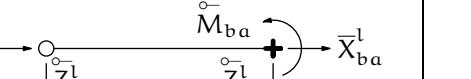
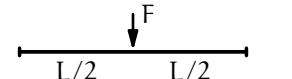
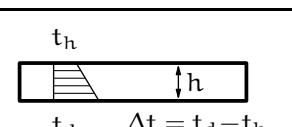
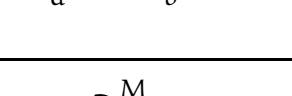
	\bar{X}_{ab}^l 	\bar{X}_{ab}^l 	\bar{X}_{ab}^l 
 $L/2 \quad L/2$	$\frac{FL}{8}$	$-\frac{FL}{8}$	$\frac{3}{16}FL$ x
	$-\frac{F}{2}$	$-\frac{F}{2}$	$-\frac{11F}{16}$ $-\frac{5F}{16}$
 f L	$\frac{fL^2}{12}$	$-\frac{fL^2}{12}$	$\frac{fL^2}{8}$ x
	$-\frac{fL}{2}$	$-\frac{fL}{2}$	$-\frac{5fL}{8}$ $-\frac{3fL}{8}$
 f L	$\frac{fL^2}{30}$	$-\frac{fL^2}{20}$	$\frac{7fL^2}{120}$ x
	$-\frac{3fL}{20}$	$-\frac{7fL}{20}$	$-\frac{27fL}{120}$ $-\frac{33fL}{120}$
 t_h t_d $\Delta t = t_d - t_h$	$\frac{EI}{h} \alpha_t \Delta t$	$-\frac{EI}{h} \alpha_t \Delta t$	$\frac{3}{2} \frac{EI}{h} \alpha_t \Delta t$ x
	0	0	$-\frac{3EI}{2hL} \alpha_t \Delta t$ $\frac{3EI}{2hL} \alpha_t \Delta t$
 $a \quad b$	$\frac{Fab^2}{L^2}$	$-\frac{Fa^2b}{L^2}$	$\frac{Fab}{2L^2}(b+L)$ x
	$\frac{Fb}{L} \left(\frac{a(a-b)}{L^2} - 1 \right)$	$\frac{Fa}{L} \left(\frac{b(b-a)}{L^2} - 1 \right)$	$-\frac{Fb}{L} \left(\frac{a(b+L)}{2L^2} + 1 \right)$ $\frac{Fa}{L} \left(\frac{b(b+L)}{2L^2} - 1 \right)$
 $a \quad b$	$\frac{Mb}{L^2}(2L-3b)$	$\frac{Ma}{L^2}(2L-3a)$	$\frac{M}{2L^2}(L^2-3b^2)$ x
	$-\frac{M}{L} \left(1 + \frac{b(2L-3b)+a(2L-3a)}{L} \right)$	$\frac{M}{L} \left(1 + \frac{b(2L-3b)+a(2L-3a)}{L} \right)$	$-\frac{M}{L} \left(1 + \frac{L^2-3b^2}{2L^2} \right)$ $\frac{M}{L} \left(1 + \frac{L^2-3b^2}{2L^2} \right)$
	$M_{ab} = \bar{M}_{ab} + k \left(2\varphi_a + \varphi_b + 3 \frac{w_b^l - w_a^l}{L} \right)$	$k = \frac{2EI}{L}$	$M_{ab} = \bar{M}_{ab} + \frac{3k}{2} \left(\varphi_a + \frac{w_b^l - w_a^l}{L} \right)$ x
	$M_{ba} = \bar{M}_{ba} + k \left(\varphi_a + 2\varphi_b + 3 \frac{w_b^l - w_a^l}{L} \right)$		$M_{ba} = \bar{M}_{ba} + \frac{3k}{2} \left(\varphi_b + \frac{w_b^l - w_a^l}{L} \right)$
	$Z_{ab}^l = \bar{Z}_{ab}^l - \frac{3k}{L} \left(\varphi_a + \varphi_b + 2 \frac{w_b^l - w_a^l}{L} \right)$		$Z_{ab}^l = \bar{Z}_{ab}^l - \frac{3k}{2L} \left(\varphi_a + \frac{w_b^l - w_a^l}{L} \right)$
	$Z_{ba}^l = \bar{Z}_{ba}^l + \frac{3k}{L} \left(\varphi_a + \varphi_b + 2 \frac{w_b^l - w_a^l}{L} \right)$		$Z_{ba}^l = \bar{Z}_{ba}^l + \frac{3k}{2L} \left(\varphi_b + \frac{w_b^l - w_a^l}{L} \right)$
$X_{ab}^l = \bar{X}_{ab}^l - n(u_b^l - u_a^l)$	$n = \frac{EA}{L}$		$X = X^l \cos \alpha - Z^l \sin \alpha$ $u^l = u \cos \alpha + w \sin \alpha$
	$X_{ba}^l = \bar{X}_{ba}^l + n(u_b^l - u_a^l)$		$Z = X^l \sin \alpha + Z^l \cos \alpha$ $w^l = -u \sin \alpha + w \cos \alpha$

$$Z_{ab}^l = \bar{Z}_{ab}^l - \frac{3k}{L} \left(\varphi_a + \varphi_b + 2 \frac{w_b^l - w_a^l}{L} \right)$$

$$Z_{ba}^l = \bar{Z}_{ba}^l + \frac{3k}{L} \left(\varphi_a + \varphi_b + 2 \frac{w_b^l - w_a^l}{L} \right)$$

$$X_{ab}^l = \bar{X}_{ab}^l - n(u_b^l - u_a^l)$$

$$n = \frac{EA}{L}$$

$$X_{ba}^l = \bar{X}_{ba}^l + n(u_b^l - u_a^l)$$

$$X = X^l \cos \alpha - Z^l \sin \alpha$$

$$u^l = u \cos \alpha + w \sin \alpha$$

$$Z = X^l \sin \alpha + Z^l \cos \alpha$$

$$w^l = -u \sin \alpha + w \cos \alpha$$