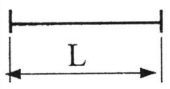
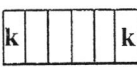
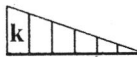
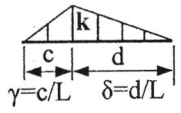
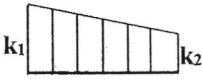
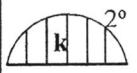
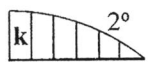
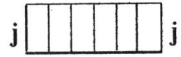
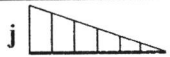
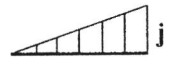
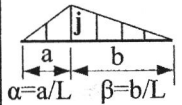
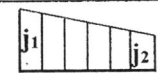
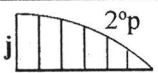
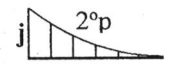
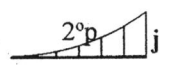
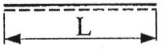
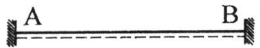
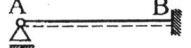
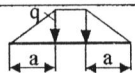
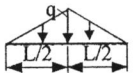
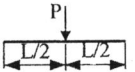
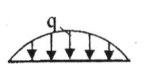
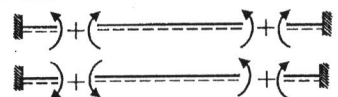


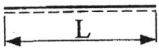
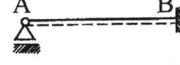
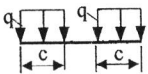
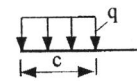
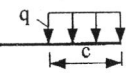
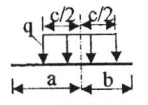
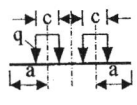
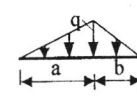
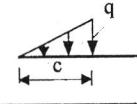
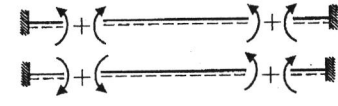
Çizelge 1.2.1 $\dot{I}\dot{C} = \int j(x)k(x)dx$ İntegral Çarpım Değerleri

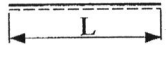
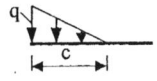
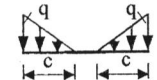
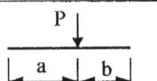
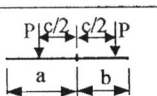
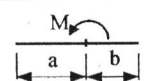
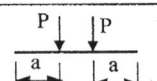
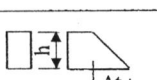
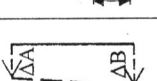
								
1		$j k L$	$j k L / 2$	$j k L / 2$	$j(k_1 + k_2)L / 2$	$2 j k L / 3$	$2 j k L / 3$	$j k L / 3$
2		$j k L / 2$	$j k L / 3$	$j k L (1 + \delta) / 6$	$j(2k_1 + k_2)L / 6$	$j k L / 3$	$5 j k L / 12$	$j k L / 4$
3		$j k L / 2$	$j k L / 6$	$j k L (1 + \gamma) / 6$	$j(k_1 + 2k_2)L / 6$	$j k L / 3$	$j k L / 4$	$j k L / 12$
4		$\frac{1}{2} j k L$	$\frac{1}{6} j k L (1 + \beta)$	$\frac{j k L}{6 \alpha \delta} [2\alpha - \alpha^2 - \gamma^2]$ $a = c$ ise $j k L / 3$	$\frac{j L}{6} [k_1(1 + \beta) + k_2(1 + \alpha)]$	$\frac{j k L}{3} (1 + \alpha \beta)$	$\frac{j k L}{12} (5 - \alpha - \alpha^2)$	$\frac{j k L}{12} (1 + \beta + \beta^2)$
5		$\frac{k L}{2} (j_1 + j_2)$	$\frac{k L}{6} (2j_1 + j_2)$	$\frac{k L}{6} [j_1(1 + \delta) + j_2(1 + \gamma)]$	$\frac{L}{6} [j_1(2k_1 + k_2) + j_2(k_1 + 2k_2)]$	$\frac{k L}{3} (j_1 + j_2)$	$\frac{k L}{12} (5j_1 + 3j_2)$	$\frac{k L}{12} (3j_1 + j_2)$
6		$2 j k L / 3$	$j k L / 3$	$(1 + \gamma \delta) j k L / 3$	$j(k_1 + k_2)L / 3$	$8 j k L / 15$	$7 j k L / 15$	$j k L / 5$
7		$2 j k L / 3$	$5 j k L / 12$	$(5 - \gamma - \gamma^2) j k L / 12$	$j(5k_1 + 3k_2)L / 12$	$7 j k L / 15$	$8 j k L / 15$	$3 j k L / 10$
8		$2 j k L / 3$	$j k L / 4$	$(5 - \delta - \delta^2) j k L / 12$	$j(3k_1 + 5k_2)L / 12$	$7 j k L / 15$	$11 j k L / 30$	$2 j k L / 15$
9		$j k L / 3$	$j k L / 4$	$(1 + \delta + \delta^2) j k L / 12$	$j(3k_1 + k_2)L / 12$	$j k L / 5$	$3 j k L / 10$	$j k L / 5$
10		$j k L / 3$	$j k L / 12$	$(1 + \gamma + \gamma^2) j k L / 12$	$j(k_1 + 3k_2)L / 12$	$j k L / 5$	$2 j k L / 15$	$j k L / 30$

ÇİZELGE 2.4.1 ANKASTRELİK UÇ MOMENTLERİ

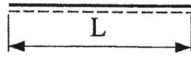
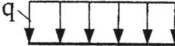
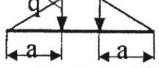
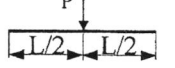
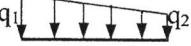
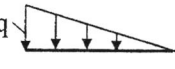
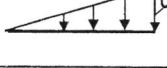
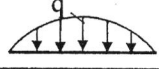
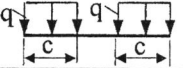
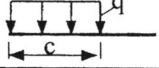
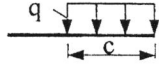
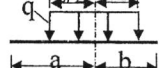
					
					
	Yük Şekli	$\mathcal{M}_A$	$\mathcal{M}_B$	$\overline{\mathcal{M}}_A$	$\overline{\mathcal{M}}_B$
1		$-\frac{qL^2}{12}$	$-\frac{qL^2}{12}$	$-\frac{qL^2}{8}$	$-\frac{qL^2}{8}$
2		$-\frac{qL^2}{12} [1 - \alpha^2 (2 - \alpha)]$	$-\frac{qL^2}{12} [1 - \alpha^2 (2 - \alpha)]$	$-\frac{qL^2}{8} [1 - \alpha^2 (2 - \alpha)]$	$-\frac{qL^2}{8} [1 - \alpha^2 (2 - \alpha)]$
3		$-\frac{5}{96} qL^2$	$-\frac{5}{96} qL^2$	$-\frac{5}{64} qL^2$	$-\frac{5}{64} qL^2$
4		$-\frac{1}{8} PL$	$-\frac{1}{8} PL$	$-\frac{3}{16} PL$	$-\frac{3}{16} PL$
5		$-\frac{L^2}{60} (3q_1 + 2q_2)$	$-\frac{L^2}{60} (2q_1 + 3q_2)$	$-\frac{L^2}{120} (8q_1 + 7q_2)$	$-\frac{L^2}{120} (7q_1 + 8q_2)$
6		$-\frac{1}{20} qL^2$	$-\frac{1}{30} qL^2$	$-\frac{1}{15} qL^2$	$-\frac{7}{120} qL^2$
7		$-\frac{1}{30} qL^2$	$-\frac{1}{20} qL^2$	$-\frac{7}{120} qL^2$	$-\frac{1}{15} qL^2$
8		$-\frac{1}{15} qL^2$	$-\frac{1}{15} qL^2$	$-\frac{1}{10} qL^2$	$-\frac{1}{10} qL^2$
$\alpha = a/L, \quad \beta = b/L,$ $\gamma = c/L$		Çizelgedeki pozitif yönler Cross ve Açılı yöntemi pozitif yönleri			

ÇİZELGE 2.4.1 DEVAMI ANKASTRELİK UÇ MOMENTLERİ

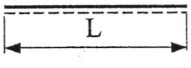
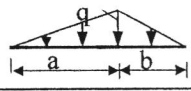
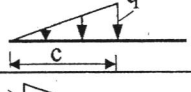
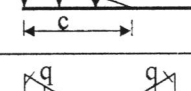
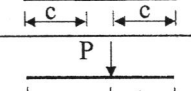
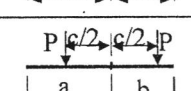
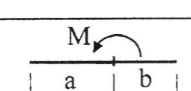
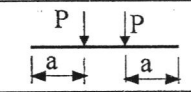
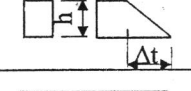
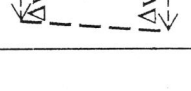
					
					
	Yük Şekli	$\mathcal{M}_A$	$\mathcal{M}_B$	$\overline{\mathcal{M}}_A$	$\overline{\mathcal{M}}_B$
9		$-\frac{qc^2}{6}(3-2\gamma)$	$-\frac{qc^2}{6}(3-2\gamma)$	$-\frac{qc^2}{4}(3-2\gamma)$	$-\frac{qc^2}{4}(3-2\gamma)$
10		$-\frac{qc^2}{3}(1,5-2\gamma+0,75\gamma^2)$	$-\frac{qc^2}{3}\gamma(1-0,75\gamma)$	$-\frac{qc^2}{8}(2-\gamma)^2$	$-\frac{qc^2}{8}(2-\gamma^2)$
11		$-\frac{qc^2}{3}\gamma(1-0,75\gamma)$	$-\frac{qc^2}{3}(1,5-2\gamma+0,75\gamma^2)$	$-\frac{qc^2}{8}(2-\gamma^2)$	$-\frac{qc^2}{8}(2-\gamma)^2$
12		$-qc\left[a\beta^2 + \frac{\gamma^2}{12}(L-3b)\right]$	$-qc\left[b\alpha^2 + \frac{\gamma^2}{12}(L-3a)\right]$	$-\frac{qbc}{2}(1-\beta^2-0,25\gamma^2)$	$-\frac{qac}{2}(1-\alpha^2-0,25\gamma^2)$
13		$-qLc\left[\alpha(1-\alpha) - \frac{\gamma^2}{12}\right]$	$-qLc\left[\alpha(1-\alpha) - \frac{\gamma^2}{12}\right]$	$-\frac{qLc}{2}\left[3\alpha(1-\alpha) - \frac{\gamma^2}{4}\right]$	$-\frac{qLc}{2}\left[3\alpha(1-\alpha) - \frac{\gamma^2}{4}\right]$
14		$-\frac{qL^2}{30}\left[1+\beta+\beta^2 - \frac{3\beta^3}{2}\right]$	$-\frac{qL^2}{30}\left[1+\alpha+\alpha^2 - \frac{3\alpha^3}{2}\right]$	$-\frac{qL^2}{120}(1+\beta)(7-3\beta^2)$	$-\frac{qL^2}{120}(1+\alpha)(7-3\alpha^2)$
15		$-\frac{qc^2}{3}\left[1-1,5\gamma+0,60\gamma^2\right]$	$-\frac{qc^2}{4}\gamma(1-0,8\gamma)$	$-\frac{qc^2}{6}\left[2-2,25\gamma+0,60\gamma^2\right]$	$-\frac{qc^2}{6}(1-0,6\gamma^2)$
$\alpha = a/L, \quad \beta = b/L,$ $\gamma = c/L$		Çizelgedeki pozitif yönler Cross ve Açılı yöntemi pozitif yönleri 			

ÇİZELGE 2.4.1 DEVAMI ANKASTRELİK UÇ MOMENTLERİ					
					
	Yük Şekli	$\mathcal{M}_A$	$\mathcal{M}_B$	$\bar{\mathcal{M}}_A$	$\bar{\mathcal{M}}_B$
16		$-\frac{qc^2}{6} [1 - \gamma + 0,3\gamma^2]$	$-\frac{qc^2}{12} \gamma(1 - 0,6\gamma)$	$-\frac{qc^2}{6} [1 - 0,75\gamma + 0,15\gamma^2]$	$-\frac{qc^2}{12} (1 - 0,3\gamma^2)$
17		$-\frac{qc^2}{12} (2 - \gamma)$	$-\frac{qc^2}{12} (2 - \gamma)$	$-\frac{qc^2}{8} (2 - \gamma)$	$-\frac{qc^2}{8} (2 - \gamma)$
18		$-Pa\beta^2$	$-Pb\alpha^2$	$-\frac{1}{2} Pa\beta(1 + \beta)$	$-\frac{1}{2} Pb\alpha(1 + \alpha)$
19		$-P(2a\beta^2 + \frac{a\gamma^2}{2} - b\gamma^2)$	$-P(2b\alpha^2 + \frac{b\gamma^2}{2} - a\gamma^2)$	$-Pb(1 - \beta^2 - 0,75\gamma^2)$	$-Pb(1 - \alpha^2 - 0,75\gamma^2)$
20		$-M\beta(3\alpha - 1)$	$-M\alpha(1 - 3\beta)$	$-\frac{M}{2} (1 - 3\beta^2)$	$-\frac{M}{2} (3\alpha^2 - 1)$
21		$-Pa(1 - \alpha)$	$-Pa(1 - \alpha)$	$-\frac{3}{2} Pa(1 - \alpha)$	$-\frac{3}{2} Pa(1 - \alpha)$
22		$-EI \frac{\alpha_t \Delta t}{h}$	$-EI \frac{\alpha_t \Delta t}{h}$	$-\frac{3}{2} EI \frac{\alpha_t \Delta t}{h}$	$-\frac{3}{2} EI \frac{\alpha_t \Delta t}{h}$
23		$-\frac{6EI}{L^2} (\Delta B - \Delta A)$	$\frac{6EI}{L^2} (\Delta B - \Delta A)$	$-\frac{3EI}{L^2} (\Delta B - \Delta A)$	$\frac{3EI}{L^2} (\Delta B - \Delta A)$
$\alpha = a/L, \quad \beta = b/L,$ $\gamma = c/L$		Çizelgedeki pozitif yönler Cross ve Açılı yöntemi pozitif yönleri			

Çizilge 2.3.9 Yük Terimleri

		YÜK TERİMLERİ	
		$\varphi_A = \frac{L}{6EI} \mathcal{L}$	$\varphi_B = \frac{L}{6EI} \mathcal{R}$
	Yük Şekli	$\mathcal{L}$	$\mathcal{R}$
1		$\frac{qL^2}{4}$	$\frac{qL^2}{4}$
2		$\frac{qL^2}{4} [1 - \alpha^2(2 - \alpha)]$	$\frac{qL^2}{4} [1 - \alpha^2(2 - \alpha)]$
3		$\frac{5}{32} qL^2$	$\frac{5}{32} qL^2$
4		$\frac{3}{8} PL$	$\frac{3}{8} PL$
5		$\frac{L^2}{60} (8q_1 + 7q_2)$	$\frac{L^2}{60} (7q_1 + 8q_2)$
6		$\frac{8}{60} qL^2$	$\frac{7}{60} qL^2$
7		$\frac{7}{60} qL^2$	$\frac{8}{60} qL^2$
8		$\frac{1}{5} qL^2$	$\frac{1}{5} qL^2$
9		$\frac{qc^2}{2} (3 - 2\gamma)$	$\frac{qc^2}{2} (3 - 2\gamma)$
10		$\frac{qc^2}{4} (2 - \gamma)^2$	$\frac{qc^2}{4} (2 - \gamma^2)$
11		$\frac{qc^2}{4} (2 - \gamma^2)$	$\frac{qc^2}{4} (2 - \gamma)^2$
12		$qbc(1 - \beta^2 - \frac{\gamma^2}{4})$	$qac(1 - \alpha^2 - \frac{\gamma^2}{4})$
13		$qLc \left[3\alpha(1 - \alpha) - \frac{\gamma^2}{4} \right]$	$qLc \left[3\alpha(1 - \alpha) - \frac{\gamma^2}{4} \right]$

Çizilge 2.3.9 devamı Yük Terimleri

YÜK TERİMLERİ			
		$\varphi_A = \frac{L}{6EI} \mathcal{L}$ $\varphi_B = \frac{L}{6EI} \mathcal{R}$ $\alpha = a/L$ $\beta = b/L$ $\gamma = c/L$	
	Yük Şekli	$\mathcal{L}$	$\mathcal{R}$
14		$\frac{qL^2}{60} (1 + \beta)(7 - 3\beta^2)$	$\frac{qL^2}{60} (1 + \alpha)(7 - 3\alpha^2)$
15		$\frac{qc^2}{3} (2 - 2,25\gamma + 0,6\gamma^2)$	$\frac{qc^2}{3} (1 - 0,6\gamma^2)$
16		$\frac{qc^2}{3} (1 - 0,75\gamma + 0,15\gamma^2)$	$\frac{qc^2}{6} (1 - 0,3\gamma^2)$
17		$\frac{qc^2}{4} (2 - \gamma)$	$\frac{qc^2}{4} (2 - \gamma)$
18		$Pa\beta(1 + \beta)$	$Pb\alpha(1 + \alpha)$
19		$2Pb(1 - \beta^2 - 0,75\gamma^2)$	$2Pa(1 - \alpha^2 - 0,75\gamma^2)$
20		$M(1 - 3\beta^2)$	$M(3\alpha^2 - 1)$
21		$3Pa(1 - \alpha)$	$3Pa(1 - \alpha)$
22		$3EI \frac{\alpha_t \Delta t}{h}$	$3EI \frac{\alpha_t \Delta t}{h}$
23		$\frac{6EI}{L^2} (\Delta v_B - \Delta v_A)$	$-\frac{6EI}{L^2} (\Delta v_B - \Delta v_A)$