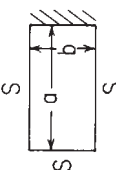
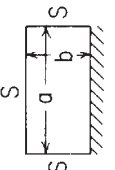
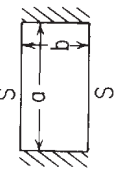
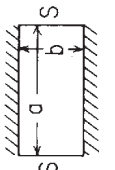


TABLE 11.4 Formulas for flat plates with straight boundaries and constant thickness (Continued)

Case no., shape, and supports	Case no., loading	Formulas and tabulated specific values										
3. Rectangular plate; three edges simply supported, one short edge (<i>b</i>) fixed		3a. Uniform over entire plate	$\sigma_{\max} = \frac{\beta q b^2}{t^2}$ and $y_{\max} = \frac{-\alpha q b^4}{Et^3}$									
			<i>a/b</i>	1	1.5	2.0	2.5	3.0	3.5	4.0		
			β	0.50	0.67	0.73	0.74	0.75	0.75	0.75		
			α	0.030	0.071	0.101	0.122	0.132	0.137	0.139		
			(Values from charts of Ref. 8; $\nu = 0.3$)									
4. Rectangular plate; three edges simply supported, one long edge (<i>a</i>) fixed		4a. Uniform over entire plate	$\sigma_{\max} = \frac{\beta q b^2}{t^2}$ and $y_{\max} = \frac{-\alpha q b^4}{Et^3}$									
			<i>a/b</i>	1	1.5	2.0	2.5	3.0	3.5	4.0		
			β	0.50	0.66	0.73	0.74	0.74	0.75	0.75		
			α	0.030	0.046	0.054	0.056	0.057	0.058	0.058		
			(Values from charts of Ref. 8; $\nu = 0.3$)									
5. Rectangular plate; two long edges simply supported, two short edges fixed		5a. Uniform over entire plate	$\sigma_{\max} = \frac{-\beta q b^2}{t^2}$									
			(At center)	$y_{\max} = \frac{-\alpha q b^4}{Et^3}$								
			<i>a/b</i>	1	1.2	1.4	1.6	1.8	2	∞		
			β	0.4182	0.5208	0.5988	0.6540	0.6912	0.7146	0.750		
			α	0.0210	0.0349	0.0502	0.0658	0.0800	0.0922			(Ref. 21)
6. Rectangular plate; two long edges fixed, two short edges simply supported		6a. Uniform over entire plate	$\sigma_{\max} = \frac{-\beta q b^2}{t^2}$									
			(At center)	$y_{\max} = \frac{-\alpha q b^4}{Et^3}$								
			<i>a/b</i>	1	1.2	1.4	1.6	1.8	2	∞		
			β	0.4182	0.4626	0.4860	0.4968	0.4971	0.4973	0.500		
			α	0.0210	0.0243	0.0262	0.0273	0.0280	0.0283	0.0285		(Ref. 21)