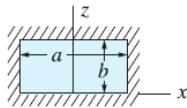| 8. Rectangular plate, all edges fixed	8a. Uniform over entire plate	

(At centre of long edge) $\quad \sigma_{max} = \dfrac{-\beta_1 q b^2}{t^2}$

(At centre) $\quad \sigma = \dfrac{\beta_2 q b^2}{t^2} \quad$ and $\quad y_{max} = \dfrac{\alpha q b^4}{E t^3}$

a/b	1.0	1.2	1.4	1.6	1.8	2.0	∞
β_1	0.3078	0.3834	0.4356	0.4680	0.4872	0.4974	0.5000
β_2	0.1386	0.1794	0.2094	0.2286	0.2406	0.2472	0.2500
α	0.0138	0.0188	0.0226	0.0251	0.0267	0.0277	0.0284

(Refs. 7 and 25 and Ref. 21 for $v = 0.3$)

8b. Uniform over small concentric circle of radius r_o (note definition of r_o')

(At center) $\quad \sigma_b = \dfrac{3W}{2\pi t^2}\left[(1+v)\ln\dfrac{2b}{\pi r_o'}+\beta_1\right] \quad$ and $\quad y_{max} = \dfrac{\alpha W b^2}{E t^3}$

(At center of long edge) $\quad \sigma_b = \dfrac{-\beta_2 W}{t^2}$

a/b	1.0	1.2	1.4	1.6	1.8	2.0	∞
β_1	−0.238	−0.078	0.011	0.053	0.068	0.067	0.067
β_2	0.7542	0.8940	0.9624	0.9906	1.0000	1.004	1.008
α	0.0611	0.0706	0.0754	0.0777	0.0786	0.0788	0.0791

(Ref. 26 and Ref. 21 for $v = 0.3$)