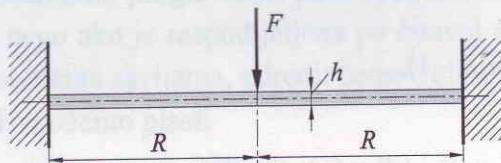
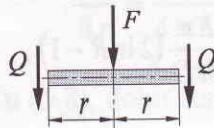


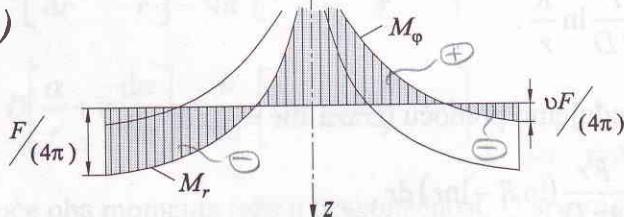
a)



b)



c)



Slika 5.13 Ploča uklještena na vanjskom rubu i opterećena koncentriranom silom  $F$  u sredini

$$\frac{1}{r} \frac{d}{dr}(\alpha r) = \frac{F}{2\pi D} \ln r + 2C_1,$$

$$\frac{d}{dr}(\alpha r) = \frac{Fr}{2\pi D} \ln r + 2C_1 r.$$

Budući da je  $\int r \ln r dr = \frac{1}{2}(2 \ln r - 1)/4$ , bit će

$$\alpha = -\frac{Fr}{8\pi D}(2 \ln r - 1) + C_1 r + \frac{C_2}{r}. \quad (c)$$

Kako se radi o punoj ploči, to je  $C_2 = 0$ . Drugi rubni uvjet glasi  $\alpha(R) = 0$ . Uvrštenjem drugog rubnog uvjeta u (c) dobit ćemo

$$-\frac{FR}{8\pi D}(2 \ln R - 1) + C_1 R = 0,$$