

**Rotacija krutog tijela  
oko nepomične osi**

$$5.3.1 \quad F_{Ax} = -6,316 \text{ kN}, \\ F_{Ay} = -18,95 \text{ kN}, \\ F_{Bx} = -9,474 \text{ kN}, \\ F_{By} = -28,42 \text{ kN}.$$

$$5.3.2 \quad F_A = -\frac{5}{6} m a \omega^2, \\ F_B = -\frac{2}{3} m a \omega^2$$

$$5.3.3 \quad F_A = -0,1769 m l \omega^2, \\ F_B = -0,3231 m l \omega^2$$

$$5.3.4 \quad F_A = 0,1944 m a \omega^2, \\ F_B = 0,139 m a \omega^2$$

$$5.3.5 \quad J_{zx} = -4 m l^2, \quad J_{xy} = -2 m l^2, \\ J_{yz} = 0$$

$$5.3.6 \quad F_A = F_B = 399,6 \text{ N}$$

$$5.3.7 \quad F_S = 30,09 \text{ N}$$

$$5.3.8 \quad a/b = -1/3 \quad (a \text{ mjereno ulijevo od} \\ \text{točke A})$$

$$5.3.9 \quad F_A = 18,1 \text{ N}, \quad F_B = -248,1 \text{ N}$$

$$5.3.10 \quad F_A = 653,57 \text{ N}, \quad F_B = 598,42 \text{ N}$$

$$5.3.11 \quad F_B = -10222 \text{ N}, \quad F_A = -57790 \text{ N}$$

$$5.3.12 \quad F_{Ay} = 253 \text{ kN}, \quad F_{Ax} = 160 \text{ kN}, \\ F_A = 299,6 \text{ kN}, \quad F_{By} = 107 \text{ kN}, \\ F_{Bx} = 280 \text{ kN}, \quad F_B = 299,6 \text{ kN}$$

$$5.3.13 \quad F_A = -1875 \text{ N}, \quad F_B = -2625 \text{ N}$$

$$5.3.14 \quad F_A = -1385,6 \text{ N}, \quad F_B = -3652,9 \text{ N}$$

$$5.3.15 \quad F_A = -1279,1 \text{ N}, \quad F_B = 596,9 \text{ N}$$

$$5.3.16 \quad F_A = -34,45 \text{ N}, \quad F_B = -28,63 \text{ N}$$

$$5.3.17 \quad F_A = 3,36 \text{ N}, \quad F_B = -3,36 \text{ N}$$

$$5.3.18 \quad \alpha = 2,87 \text{ rad/s}^2, \\ a_1 = 0,432 \text{ m/s}^2, \\ a_2 = 0,576 \text{ m/s}^2, \\ F_{S1} = 143,4 \text{ kN}, \\ F_{S2} = 105,9 \text{ kN}$$

$$5.3.19 \quad v_A = 1,253 \text{ m/s}$$

$$5.3.20 \quad \alpha_3 = \frac{M}{d_3^2 \left( \frac{J_3}{d_3^2} + \frac{J_2}{d_2^2} + \frac{(J_1 + J_Z)}{d_1^2} \right)}$$

$$J_i = \pi \cdot \gamma \cdot d_i^4 \cdot b_i / (32g), \text{ kg m}^2$$

$$5.3.21 \quad s = \frac{m_2 g r^2 t^2}{2} \left( \frac{m_1 \cdot b^2}{12} + m_2 \cdot r^2 \right)^{-1}$$

$$5.3.22 \quad v_G = 1,94 \text{ m/s}$$

$$5.3.23 \quad F_{Ax} = -\frac{3}{8} G, \quad F_{Ay} = \frac{5}{8} G$$

$$5.3.24 \quad c = 95,375 \text{ N/m}$$

$$5.3.25 \quad \text{a) } a_1 = -0,97 \text{ m/s}^2, \\ \text{b) } s_1 = 5,09 \text{ m}$$

$$5.3.26 \quad \omega = 16,373 \text{ rad/s}$$

$$5.3.27 \quad a = 11,327 \text{ m/s}^2, \quad S = 55,07 \text{ N}$$

$$5.3.28 \quad \text{a) } a_1 = 0,446 \text{ m/s}^2, \\ a_4 = 0,892 \text{ m/s}^2, \\ \text{b) } S_1 = 93,64 \text{ N}, \quad S_2 = 44,14 \text{ N}, \\ S_4 = 42,81 \text{ N}$$

$$5.3.29 \quad a = 1,03 \text{ m/s}^2, \quad F_A = 6129,6 \text{ N}$$

$$5.3.30 \quad \alpha = 72,15^\circ$$