

- 5.3.27 a) $a_1 = -0,97 \text{ m/s}^2$,
b) $s_1 = 5,09 \text{ m}$
- 5.3.28 $\omega = 16,37 \text{ rad/s}$
- 5.3.29 $a = 11,33 \text{ m/s}^2$, $S = 55,07 \text{ N}$
- 5.3.30 a) $a_1 = 0,446 \text{ m/s}^2$,
 $a_4 = 0,892 \text{ m/s}^2$,
b) $S_1 = 93,64 \text{ N}$, $S_2 = 44,14 \text{ N}$,
 $S_4 = 42,81 \text{ N}$
- 5.3.31 $a = 1,03 \text{ m/s}^2$, $F_A = 6129,6 \text{ N}$
- 5.3.32 $J_O = 27,45 \text{ kg} \cdot \text{m}^2$, a u
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 $J_O = 13,73 \text{ kg} \cdot \text{m}^2$
- 5.3.33 $J = 64,57 \text{ kg} \cdot \text{m}^2$

Ravninsko gibanje krutog tijela

- 5.4.1 a) $a = 2,803 \text{ m/s}^2$,
b) $a = 3,402 \text{ m/s}^2$,
- 5.4.2 $a_2 = 7,01 \text{ m/s}^2$, $F_{S1} = 532,5 \text{ N}$,
 $F_{S2} = 168,2 \text{ N}$, $F_{S3} = 655,2 \text{ N}$,
 $F_{S4} = 45,6 \text{ N}$
- 5.4.3 $a = \frac{2}{9}g$, $F_A = 10mg$, $F_B = 0$.
- 5.4.4 $a_S = 3,68 \text{ m/s}^2$, $\alpha = 1,84 \text{ rad/s}^2$
- 5.4.5 $F_S = 100 \text{ N}$, $a = 6,54 \text{ m/s}^2$
- 5.4.6 $c = 706,78 \text{ N/m}$, $\omega = 2,82 \text{ rad/s}$
- 5.4.7 $v_S = \sqrt{2gr/3}$
- 5.4.8 $a_S = F \cdot (R - r) \cdot [m \cdot R + (J_S/R)]^{-1}$,
 $\alpha = a_S/R$
- 5.4.9 a) $a_A = 3g / [(4/\lambda) + \lambda]$,
b) $a_A = 0,3528g$,
c) $(a_A)_{\max} = 0,75g$ za $\lambda = 2$

- 5.4.10 $v = 6,025 \text{ m/s}$
- 5.4.11 $a = 1,858 \text{ m/s}^2$
- 5.4.12 $t = 3,4 \text{ s}$
- 5.4.13 $F = 81,49 \text{ N}$
- 5.4.14 $a_S = \frac{2F}{m} \cdot \frac{\cos^2 \beta}{(1/3) + \cos^2 \beta}$,
 $\alpha = \frac{4F}{ml} \cdot \frac{\cos \beta}{(1/3) + \cos^2 \beta}$,
 $F_{nB} = F \cdot \frac{1 - \cos^2 \beta}{(1/3) + \cos^2 \beta}$
- 5.4.15 $r = 10,4 \text{ cm}$
- 5.4.16 $\alpha = \frac{8g(R^3 - r^3)}{9\pi(R^4 + r^4)}$
- 5.4.17 a) $\alpha = 5,163 \text{ rad/s}^2$,
b) $\mu = 0,056$
- 5.4.18 $v_A = 1 \text{ m/s}$
- 5.4.19 $a = 1,4 \text{ m/s}^2$
- 5.4.20 $h_k = 7,14 \text{ m}$
- 5.4.21 $\beta = 46,88^\circ$
- 5.4.22 a) $h = 0,135 \text{ m}$, b) $v_B = 1,33 \text{ m/s}$
- 5.4.23 $\varphi = 55,15^\circ$
- 5.4.24 a) $\alpha = 7,976 \text{ rad/s}^2$,
b) $\omega = 7,292 \text{ rad/s}$
- 5.4.25 $a = 0,7124 \text{ m/s}^2$, $S_1 = 73,16 \text{ N}$,
 $S_3 = 76,72 \text{ N}$
- 5.4.26 a) $v_1 = 1,583 \text{ m/s}$,
b) $a_1 = 0,835 \text{ m/s}^2$, c) $F_{S1} = 179,5 \text{ N}$,
d) $F_{S2} = 167 \text{ N}$
- 5.4.27 a) $v_1 = 2,521 \text{ m/s}$,
b) $a_1 = 3,179 \text{ m/s}^2$,
c) $F_{S1} = 83,17 \text{ N}$,
d) $F_{S2} = 91,14 \text{ N}$