

- 4.4.15  $\omega_{AB} = 3,13 \text{ rad/s}$ ,  
 $\omega_{BC} = 0,475 \text{ rad/s}$ ,  
 $\alpha_{AB} = 3,7 \text{ rad/s}^2$ ,  $\alpha_{BC} = 4,58 \text{ rad/s}^2$
- 4.4.16  $\omega_{AO} = 0,727 \text{ rad/s}$ ,  
 $\omega_{BO} = 0,275 \text{ rad/s}$ ,  
 $\alpha_{AO} = 0,356 \text{ rad/s}^2$ ,  
 $\alpha_{BO} = 0,570 \text{ rad/s}^2$
- 4.4.17  $v_D = 3,5 \text{ m/s}$ ,  $a_D = 43 \text{ m/s}^2$
- 4.4.18  $\omega_{AB} = 0,575 \text{ rad/s}$  (u smj. k. s.),  
 $\alpha_{AB} = 0,4875 \text{ m/s}^2$  (sup. smj. k. s.)
- 4.4.19  $a_B = 6,708 \text{ m/s}^2$ ,  $a_D = 8 \text{ m/s}^2$ ,  
 $\omega = \sqrt{2} \text{ rad/s}$ ,  $\alpha = 3 \text{ rad/s}^2$
- 4.4.20  $v_B = 0,693 \text{ m/s}$ ,  $a_B = 2,4 \text{ m/s}^2$
- 4.4.21  $\vec{v}_A = 0,6\vec{i}$ ,  $v_A = 0,6 \text{ m/s}$ ,  
 $\vec{v}_B = 0,6\vec{i}$ ,  $v_B = 0,6 \text{ m/s}$ ,  
 $\vec{a}_A = 1,2\vec{i} - 0,6\vec{j}$ ,  $a_A = 1,342 \text{ m/s}^2$   
 $\alpha_{AB} = 1,5 \text{ rad/s}^2$ ,  $a_B = 1,65 \text{ m/s}^2$
- 4.4.22  $v_A = 0,9 \text{ m/s}$ ,  $v_B = 0,375 \text{ m/s}$ ,  
 $v_C = 0,65 \text{ m/s}$ ,  $v_D = 1,04 \text{ m/s}$ ,  
 $\omega = 2,25 \text{ rad/s}$
- 4.4.23  $v_E = 0,53 \text{ m/s}$ ,  $a_E = 0,345 \text{ m/s}^2$
- 4.4.24  $\omega = 12 \text{ rad/s}$ ,  $\alpha = 113,6 \text{ rad/s}^2$
- 4.4.25  $v_C = 1,6 \text{ m/s}$ ,  $\omega_{BC} = 5,5 \text{ rad/s}$ ,  
 $\alpha_{BC} = -31,6 \text{ rad/s}^2$
- 4.4.26  $v_C = 0,15 \text{ m/s}$ ,  $\omega_{BC} = 2,5 \text{ rad/s}$ ,  
 $\alpha_{BC} = -2,666 \text{ rad/s}^2$
- 4.4.27  $v_B = 1,5 \text{ m/s}$ ,  $a_B = 3,7 \text{ m/s}^2$ ,  
 $v_C = 0,7 \text{ m/s}$ ,  $a_C = 14,2 \text{ m/s}^2$ ,  
 $\omega_{ABC} = 4 \text{ rad/s}$ ,  $\alpha_{ABC} = 31,33 \text{ rad/s}^2$
- 4.4.28  $v_D = 0,33 \text{ m/s}$ ,  $a_D = -1,55 \text{ m/s}^2$ ,  
 $\omega_{AB} = 2,925 \text{ rad/s}$ ,  
 $\omega_{CD} = 1,01 \text{ rad/s}$ ,  
 $\alpha_{AB} = -2,28 \text{ rad/s}^2$ ,  $\alpha_{CD} = 3,61 \text{ rad/s}^2$
- 4.4.29  $v_C = 1,1 \text{ m/s}$ ,  $a_C = 20,6 \text{ m/s}^2$
- 4.4.30  $v_C = 4,8 \text{ m/s}$ ,  $a_C = 25 \text{ m/s}^2$ ,  
 $\omega_{BC} = 4,3 \text{ rad/s}$ ,  $\alpha_{BC} = 29,5 \text{ rad/s}^2$ ,  
 $\omega_{CD} = 3,2 \text{ rad/s}$ ,  $\alpha_{CD} = -13,3 \text{ rad/s}^2$
- 4.4.31  $v_C = 6 \text{ m/s}$ ,  $\omega_{BC} = 5 \text{ rad/s}$
- 4.4.32  $v_A = 2,158 \text{ dm/s}$ ,  $\omega_{BC} = 0,992 \text{ rad/s}$
- 4.4.33  $v_A = 2,4 \text{ m/s}$ ,  $\omega_{AB} = 4,156 \text{ rad/s}$
- 4.4.34  $v_C = 1,330 \text{ m/s}$ ,  $\omega_{AC} = 4,267 \text{ rad/s}$
- 4.4.35  $v_B = 0,8196 \text{ m/s}$ ,  
 $a_B = 2,529 \text{ m/s}^2$ ,  
 $\omega_{AB} = 0,4899 \text{ rad/s}$ ,  
 $\alpha_{AB} = 2,276 \text{ rad/s}^2$
- 4.4.36  $\omega_{BC} = 0,2857 \text{ rad/s}$ ,  $\alpha_{BC} = 0 \text{ rad/s}^2$ ,  
 $\omega_{CD} = 0,2857 \text{ rad/s}$ ,  
 $\alpha_{CD} = -0,6857 \text{ rad/s}^2$
- 4.4.37  $a_A = 0,04 \text{ m/s}^2$ ,  $\omega_{AB} = 0$ ,  $\alpha_{AB} = 0$   
 $v_B = 0$ ,  $a_B = 0,04 \text{ m/s}^2$

## 5 Kinematika sfernog gibanja

- 5.1 a)  $\delta = 33,69^\circ$  (mjereno od osi y),  
b)  $\delta = 146,3^\circ$  (mjereno od osi y)
- 5.2  $\vec{\omega}_{AB} = p\vec{j} + \omega_0\vec{k}$ ,  $\vec{\alpha}_{AB} = -p\omega_0\vec{i}$
- 5.3  $\vec{v}_A = 27,3\vec{i} - 3,87\vec{j} - 13,07\vec{k}$ ,  
 $v_A = 30,51 \text{ m/s}$ ,  
 $\vec{a}_A = -949\vec{i} + 2520\vec{j} - 2730\vec{k}$ ,  
 $a_A = 3834,6 \text{ m/s}^2$
- 5.4  $a_A = 15,65 \text{ m/s}^2$ ,  $R = 0,652 \text{ m}$