

15. Povrch a objem kocky, kvádra, hranola

1. $x = 31 \text{ h } 15 \text{ min}$
2. $48^\circ 32'$, $7,07 \text{ cm}$, $10,68 \text{ cm}$
3. $1\,575 \text{ m}^3$
4. $V = 648 \text{ cm}^3$
5. $10\,800\,000 \text{ ks}$
6. $V = 40\,824 \text{ litrov}$
7. 4 dm
8. $S = 175 \text{ dm}^2$

16. Povrch a objem valca

1. $m = 0,423\,9 \text{ kg}$
2. 9-krát sa zväčší
3. $15,072 \text{ m}^2$
4. $19,6 \text{ cm}$
5. $S = 12,2 \text{ m}^2$
6. $7\,322,48 \text{ cm}^2$
7. $8,22 \text{ litra}$
8. $663,07 \text{ cm}^2$
9. $a = 5 \text{ cm}$, $r = 2,82 \text{ cm}$
10. $V = 961,625 \text{ litrov}$, $S = 61\,736,325 \text{ cm}^2$
11. $V = 411,52 \text{ litrov}$, $S = 459,36 \text{ cm}^2$
12. $V_V : V_K = 1,57$, $S_V : S_K = 1,198$
13. $V_K : V_V = 1,91$
14. $S = 4\,710 \text{ m}^2$, $p = 212\,315$ -krát

17. Povrch a objem ihlana

1. $V = 2\,000 / 3 \text{ cm}^3$, $S = 512,4 \text{ cm}^2$
2. $V = 746,66 \text{ cm}^3$
3. $a = 3,92 \text{ cm}$, $V = 10,244 \text{ m}^3$, $S = 37,32 \text{ cm}^2$
4. $v = 34,64 \text{ cm}$, $S = 3\,363 \text{ cm}^2$
5. $V = 2\,205 \text{ cm}^3$
6. $V = 41,667 \text{ cm}^3$, $S = 85,36 \text{ cm}^2$
7. $V = 41,667 \text{ cm}^3$, $S = 80,9 \text{ cm}^2$
8. $V = 648 \text{ cm}^3$
9. $S = 3,26 \text{ m}^2$
10. $V = 483,35 \text{ cm}^3$, $S = 443,2 \text{ cm}^2$
11. $V = 1\,204 \text{ cm}^3$, $S = 724,5 \text{ cm}^2$
12. $S_1 = S_2 = S_3$, $v_1 = v_2 = v_3$, $V_1 = V_2 = V_3$
13. $V = 930,67 \text{ cm}^3$, $S = 667,2 \text{ cm}^2$

18. Povrch a objem kužeľa

1. a) $V = 209,33 \text{ cm}^3$, $S = 226,61 \text{ cm}^2$
b) $V = 1\,808,64 \text{ cm}^3$, $S = 1\,091,61 \text{ cm}^2$
c) $V = 26,17 \text{ cm}^3$, $S = 56,65 \text{ cm}^2$
2. a) $v = 6,93 \text{ cm}$, $s = 8 \text{ cm}$, $V = 116,05 \text{ cm}^3$, $S = 150,72 \text{ cm}^2$
b) $v = 46,65 \text{ cm}$, $s = 48,3 \text{ cm}$, $V = 7\,629,22 \text{ cm}^3$, $S = 2\,386,4 \text{ cm}^2$
c) $v = 24,75 \text{ cm}$, $s = 28,43 \text{ cm}$, $V = 5\,077,38 \text{ cm}^3$, $S = 1\,865,22 \text{ cm}^2$
3. a) $v = 11,425 \text{ cm}$, $s = 13,947 \text{ cm}$, $V = 765,32 \text{ cm}^3$, $S = 551,31 \text{ cm}^2$
b) $v = 11,547 \text{ cm}$, $s = 23,094 \text{ cm}$, $V = 4\,834,344 \text{ cm}^3$, $S = 2\,706,3 \text{ cm}^2$
c) $v = 18,423 \text{ cm}$, $s = 25,757 \text{ cm}$, $V = 6\,247,6 \text{ cm}^3$, $S = 2\,473,15 \text{ cm}^2$
4. a) $v = 6,71 \text{ cm}$, $V = 252,83 \text{ cm}^3$, $S = 282,6 \text{ cm}^2$
b) $v = 9,53 \text{ cm}$, $V = 301,74 \text{ cm}^3$, $S = 284,96 \text{ cm}^2$
c) $r = 11,82 \text{ cm}$, $V = 1\,096,74 \text{ cm}^3$, $S = 958,3 \text{ cm}^2$
5. $r = 1,25 \text{ m}$, $s = 3,72 \text{ m}$, $S = 19,5 \text{ m}^2$
6. $r = 9,77 \text{ cm}$
7. áno, $r = 1,168 \text{ dm}$
8. $V = V_2 - V_1 = \frac{1}{3}\pi r^2 \cdot (2v) - \frac{1}{3}\pi r^2 v = \frac{1}{3}\pi r^2 v = V_1$
9. $V = 113,04 \text{ ml}$
10. $r = 6,75 \text{ cm}$, $s = 9 \text{ cm}$, $v = 5,95 \text{ cm}$, $V = 283,75 \text{ cm}^3$
11. $S_1 > S_2 > S_3$, $v_1 > v_2 > v_3$, $V_1 > V_2 > V_3$

19. Povrch a objem gule

1. $V = 381,51 \text{ cm}^3$
2. $r = 1,061 \text{ dm}$
3. $d = 2,82 \text{ cm}$
4. $V = 2\,138,5 \text{ dm}^3$
5. $V = 8 \cdot V_1$, $S = 4 \cdot S_1$
6. $V = 133,973 \text{ cm}^3 = 134 \text{ ml}$, 15-krát
7. $m = 33 \text{ kg}$
8. $r = 6,04 \text{ cm}$, $r = 4,95 \text{ cm}$
9. $V_V > V_G > V_K$
10. $S = 75 \text{ m}^2$
11. $V = 904\,320 \text{ mm}^3$
12. $S = S_1 + S_2 + S_3 = 144\,493,38 \text{ mm}^2$
13. $r = 20 \text{ mm}$
14. a) $V_G : V_K = 2,72$, b) $S_G : S_K = 1,57$
15. $V = 32,26 \text{ cm}^3$
16. $V = 1,082 \cdot 10^{12} \text{ km}^3$, $S = 509\,645\,864 \text{ km}^2$
17. 10^{24} -krát
18. $V_Z : V_M = 49$, $S_M = 38\,026\,656 \text{ km}^2$
19. $V_K > V_G$, $S_K > S_G$, $V_K : V_G = 1,91$, $S_K : S_G = 1,91$
20. $8,06 \text{ kg}$