

Odpovědi k úlohám

$$\text{Ad 1. } \int_{-\pi/2}^{\pi/2} d\varphi \int_0^{2 \cos \varphi} r dr.$$

$$\text{Ad 2. } \int_0^{\pi/2} d\varphi \int_0^{\frac{1}{\sin \varphi + \cos \varphi}} r dr.$$

$$\text{Ad 3. } \int_0^{\pi/4} d\varphi \int_0^{\frac{a \cos \varphi}{\sin^2 \varphi}} r dr + \int_{\pi/4}^{3\pi/4} d\varphi \int_0^{a/\sin \varphi} r dr +$$

$$+ \int_{3\pi/4}^{\pi} d\varphi \int_0^{\frac{a \cos \varphi}{\sin^2 \varphi}} r dr.$$

$$\text{Ad 4. } \int_{-\pi/4}^{\pi/4} d\varphi \int_0^{a\sqrt{\cos 2\varphi}} r dr.$$

$$\text{Ad 5. } \int_a^b u du \int_{\alpha}^{\beta} dv.$$

$$\text{Ad 6. } \frac{1}{2} \int_1^2 du \int_{-u}^{4-u} dv.$$

$$\text{Ad 7. } 4 \int_0^{\pi/2} d\psi \cos^3 \psi \sin^3 \psi \int_0^a \rho d\rho.$$

$$\text{Ad 8. } \int_{-1}^1 f(u) du.$$

$$\text{Ad 9. } \ln 2 \cdot \int_1^2 f(u) du.$$

$$\text{Ad 10. } 1 + \frac{37}{128} - \ln 2.$$

$$\text{Ad 11. } \frac{\pi}{\sqrt{2}}.$$

$$\text{Ad 12. } \frac{2\pi ab}{3}.$$

$$\text{Ad 13. } t \int_0^{2\pi} f(t \cos \varphi, t \sin \varphi) d\varphi.$$

$$\text{Ad 14. } \text{Čtverec } 0 \leq u \leq 1, 0 \leq v \leq 1.$$

$$\text{Ad 15. } u = xy, v = x - y.$$

$$\text{Ad 16. } ab/70.$$

$$\text{Ad 17. } \frac{(\beta - \alpha)(b^2 - a^2)}{2(\alpha + 1)(\beta + 1)}.$$

$$\text{Ad 18. } \frac{a^2 \ln 2}{2}.$$

$$\text{Ad 19. } \frac{4}{3}(q - p)(b - a).$$

$$\text{Ad 20. } \frac{1}{(\alpha - \beta)(\beta - 1)}.$$

$$\text{Ad 21. } \frac{1}{p - 1}.$$

$$\text{Ad 22. } \frac{\pi}{p - 1}.$$

$$\text{Ad 23. } 2\pi.$$

$$\text{Ad 24. } \frac{\pi}{2}.$$

$$\text{Ad 25. } \pi.$$

$$\text{Ad 26. } \pi/2.$$