

$$\begin{array}{lllll}
\mathbf{1.1} \int_1^2 (4x^3 - 2x + 1) dx & \mathbf{1.2} \int_2^4 (2\sqrt{x^3} + 1) dx & \mathbf{1.3} \int_0^\pi (\sin x + \cos x) dx & \mathbf{1.4} \int_e^{e^2} \frac{1}{x} dx & \mathbf{1.5} \int_{-5}^{10} 4 dx \\
\mathbf{1.8} \int_{-4}^2 2\sqrt{17-4x} dx & \mathbf{1.9} \int_0^1 \frac{x}{(4x^2+1)^2} dx & \mathbf{1.10} \int_{-1}^1 x^2 (2x^3-1)^{15} dx & \mathbf{1.11} \int_{\frac{\pi}{6}}^{\frac{\pi}{3}} \frac{\cos x}{1+\sin x} dx & \\
\mathbf{1.12} \int_{\frac{\pi}{3}}^{\pi} \cos^2 x \cdot \sin x dx & \mathbf{1.13} \int_{-\pi}^{2\pi} 4 \sin x \cdot \cos x dx & \mathbf{1.15} \int_0^1 3xe^{2x^2+1} dx & & \\
\mathbf{1.16} \int_0^2 \frac{e^{3x}}{e^{3x}+1} dx & \mathbf{1.17} \int_e^4 \frac{dx}{2x \cdot \ln x} & \mathbf{1.18} \int_4^9 \frac{dx}{\sqrt{x}-1} & \mathbf{1.19} \int_0^1 \frac{xdx}{\sqrt{4-x^2}} & \\
\mathbf{1.20} \int_1^{2e} \frac{1}{2} \ln x dx & \mathbf{1.21} \int_0^\pi (2x+3) \sin x dx & \mathbf{1.22} \int_\pi^{\frac{3}{2}\pi} x^2 \cdot \cos x dx & \mathbf{1.23} \int_1^e 4x \cdot \ln x dx & \mathbf{1.24} \int_e^{3e} \frac{\ln x}{x^3} dx
\end{array}$$

Výsledky:

$$\begin{array}{lll}
\mathbf{1.1} \ 15 & \mathbf{1.10} \ \frac{1}{96}(1-3^{16}) & \mathbf{1.17} \ \frac{1}{2} \ln(\ln 4) \\
\mathbf{1.2} \ \frac{138}{5} - \frac{16}{5} \sqrt{2} & \mathbf{1.11} \ \ln \frac{2+\sqrt{3}}{3} & \mathbf{1.18} \ 4\sqrt{2} - 2\sqrt{3} \\
\mathbf{1.3} \ 1 & \mathbf{1.12} \ \frac{3}{8} & \mathbf{1.19} \ 2 - \sqrt{3} \\
\mathbf{1.4} \ 1 & \mathbf{1.13} \ 0 & \mathbf{1.20} \ e + \frac{1}{2} \\
\mathbf{1.5} \ 60 & \mathbf{1.14} \ -\frac{\pi}{2} & \mathbf{1.21} \ 2\pi + 6 \\
\mathbf{1.6} \ \frac{23}{6} + 6 \ln \frac{5}{2} & \mathbf{1.15} \ \frac{3}{4} e(e^2 - 1) & \mathbf{1.22} \ -\frac{9}{4} \pi^2 + 5\pi + 2 \\
\mathbf{1.7} \ 1 + \frac{\pi}{2} & \mathbf{1.16} \ \frac{1}{3} \ln \frac{e^6 + 1}{2} & \mathbf{1.23} \ e^2 + 1 \\
\mathbf{1.8} \ -\frac{1}{3} (27 - \sqrt{33^3}) & & \mathbf{1.24} \ \frac{-\ln 3e + 13}{18e^2}
\end{array}$$