Vypočítejte:

$$\int_{\frac{\pi}{6}}^{\frac{\pi}{2}} \sin^2 x \cdot \cos x \, dx \qquad \left[\frac{7}{24}\right]$$

$$\int_{-4}^{2} \sqrt{17+4x} \, dx \qquad \left[\frac{62}{3}\right]$$

$$\int_{0}^{\pi} x \cdot \sin x \, dx \qquad [\pi]$$

$$\int_{0}^{\pi/4} \operatorname{tg} x \, dx \qquad [\ln \sqrt{2}]$$

$$\int_{3}^{4} \frac{1}{x^2-3x+2} \, dx \qquad \left[\ln \frac{4}{3}\right]$$

$$\int_{e}^{e^2} \frac{1}{x \cdot \ln x} \, dx \qquad [\ln 2]$$

$$\int_{1}^{2} \frac{1}{x^2+2x} \, dx \qquad \left[\frac{1}{2} \ln \frac{3}{2}\right]$$

$$\int_{0}^{1} \frac{\operatorname{arctg} x}{x^2+1} \, dx \qquad \left[\frac{\pi^2}{32}\right]$$

$$\int_{1}^{2} x^3 \cdot e^{x^2} \, dx \qquad \left[\frac{3}{2} e^4\right]$$

$$\int_{1}^{e} \sqrt{x} \cdot \ln x \, dx \qquad \left[\frac{2}{9}(\sqrt{e^3}+2)\right]$$