18. cvičení

Příklady

(03) $\displaystyle\int_4^\infty \frac{x}{(x-1)(x-2)(x-3)}\,dx$

(04) $\displaystyle\int_{-\infty}^0 \frac{x}{x^3-1}\,dx$

(25) $\displaystyle\int_0^\pi \frac{\sin x}{\cos^2 x+1}\,dx$

(29) $\displaystyle\int_{-\infty}^\infty \frac{e^x}{e^{2x}-3e^x+3}\,dx$

(35) $\displaystyle\int_0^\pi \sin^2 x \cos^2 x\,dx$

(40) $\displaystyle\int_0^{\frac{\pi}{4}} \sqrt{\cos x - \cos^3 x}\,dx$

(42) $\displaystyle\int_{-1}^1 x^2 e^{-x}\,dx$

(44) $\displaystyle\int_{-\pi}^\pi \frac{\cos^3 x}{\sqrt[3]{\sin x}}\,dx$

Hinty: $y=\cos x$, $y=\sin x$

(49) $\displaystyle\int_0^1 \arccos{}^2 x\,dx$

(48) $\displaystyle\int_0^1 x\arcsin x\,dx$

(62) $\displaystyle\int_0^1 x^2\sqrt{1-x^2}\,dx$

(71) $\displaystyle\int_0^1 \sqrt{\frac{x+1}{x}}\,dx$

(75) $\displaystyle\int_4^\infty \frac{1}{x^2}\sqrt{\frac{x-2}{x-4}}\,dx$

(87) $\displaystyle\int_0^{4\pi} \frac{dx}{\cos x + 2\sin x + 3}$

(95) $\displaystyle\int_0^{\frac{\pi}{2}} \frac{dx}{1+\mathrm{tg}\,x}$