11. cvičení - výsledky

Příklad 1.

(a) 550.

(b) $\frac{5}{2}$.

(c) 2π.

(d) $2 - \frac{2}{e}$.

(e) $\frac{\pi}{12}(3 + 2\pi^2)$.

(f) $\frac{2}{3}\pi - \frac{\sqrt{3}}{2}$.

(g) $\frac{1}{2} + \frac{1}{2}e^{\frac{\pi}{2}}$.

(h) $\frac{3}{4} - \frac{\log 2}{2}$.

(i) $20\sqrt{2}$.

(j) $\frac{29}{270}$.

(k) $\frac{\pi}{2\sqrt{6}}$.

(l) $\frac{2\pi}{\sqrt{3}} - \frac{\pi}{\sqrt{2}}$.

(m) $2\sqrt{2}\pi$.

(n) 0.

(o) $-\frac{1}{2}\log 3$.

Příklad 2.

(a) $\frac{5}{2}$

(b) $\frac{5}{3} + \pi^2$

(c) $\frac{31}{24}$

(d) $\frac{2e^2-e-1}{e^2}$

(e) $\cos\left(\frac{17}{12}\pi\right) + \cos\left(\frac{3}{4}\pi\right) + 2$

(f) $\frac{1}{\sqrt{2}}\left(\pi + \arctan\sqrt{6}\right)$

(g) $\sqrt{2}\left(\pi + \arctan\frac{1}{\sqrt{2}} - \arctan\sqrt{2}\right)$

(h) $\frac{\pi}{\sqrt{3}}$

(i) $\frac{1}{\sqrt{2}}\left(\pi - \arctan\frac{2+\sqrt{3}}{\sqrt{2}} + \arctan\sqrt{2}\right)$

Příklad 3.

(a) $\frac{1}{2}\log|\cos x + 1| - \frac{1}{2}\log|\cos x + 2| + \frac{1}{6}\log|\cos x + 3| - \frac{1}{6}\log|\cos x|$.

(b) $\frac{2}{\sqrt{3}}\arctan\left(\frac{2\tan\frac{x}{2}+1}{\sqrt{3}}\right)$.

(c) $\log\left|\sqrt{\frac{x+1}{x+4}} + 1\right| + \frac{1}{2}\log\left|2\sqrt{\frac{x+1}{x+4}} - 1\right| - \frac{1}{2}\log\left|2\sqrt{\frac{x+1}{x+4}} + 1\right| - \log\left|\sqrt{\frac{x+1}{x+4}} - 1\right|$.

(d) $\frac{e^{3x}}{78}\left(6\sin(2x) + 9\cos(2x) + 13\right)$.

(e) $\frac{1}{\sqrt{5}}\arctan\left(\frac{3\tan\frac{x}{2}+1}{2\sqrt{5}}\right) - \frac{1}{5}\left(3\log|\sin x + 2\cos x + 5| + x\right)$ na $(-\pi, \pi)$.

(f) $\frac{\log x((x-2)\log x - 4) - 4}{2x}$.

(g) $-4\log|\tan x + 1| - \frac{8}{\tan x + 1} + \frac{4}{(\tan x + 1)^2} - \frac{4}{3(\tan x + 1)^3} + \tan x$.

(h) $\frac{1}{16}\left(\log\left(\sqrt{x} + 2\right)\right) + 2\arctan\frac{\sqrt{x}}{2} - \log|\sqrt{x} - 2|$.

(i) $\log|\log x - 1| - \frac{1}{2}\left(\log\left(\log^2 x + \log x + 1\right)\right) + \frac{1}{\sqrt{3}}\arctan\left(\frac{2\log x + 1}{\sqrt{3}}\right) + \log x$.

(j) $\log|e^x - 3| - \frac{2}{\sqrt{7}}\arctan\frac{2e^x - 1}{\sqrt{7}} + \log(e^x + 1)$.

(k) $\frac{4}{3}\log\left|x^{\frac{3}{4}}+3\sqrt[4]{x}-4\right|$.

(l) $\frac{2}{\sqrt{3}}\arctan\frac{\tan\frac{x}{2}}{\sqrt{3}}-\frac{1}{\sqrt{2}}\arctan\frac{\tan\frac{x}{2}}{\sqrt{2}}$.

(m) $\frac{1}{4}\log\left(1+\frac{2}{\log^2 2}\right)$.

(n) $\frac{\pi}{3}\left(\frac{1}{\sqrt{2}}+\frac{2}{\sqrt{3}}\right)$.

(o) $-\frac{14}{3}+\frac{3}{2}\pi+\log 2$.

(p) $\frac{2\pi}{\sqrt{3}}$.