Integrujte

(1) $\int 1-\sqrt{x^5\sqrt{x^3\sqrt{x}}}\,\mathrm{d}x.$

(2) $\int \mathrm{tg}^2\,x\,\mathrm{d}x.$

(3) $\int \left(\frac{1}{x}-\sqrt{x}\right)^2\,\mathrm{d}x.$

(4) $\int \frac{\cos(2x)}{\cos^2(x)}\,\mathrm{d}x$

(5) $\int \mathrm{cotg}^2\,x\,\mathrm{d}x.$

(6) $\int \frac{x^2}{1+x^2}\,\mathrm{d}x.$

(7) $\int \frac{\left(1-2x^2\right)^2}{\sqrt[3]{x}}\,\mathrm{d}x.$

(8) $\int \left(1-\frac{1}{x}\right)^3\,\mathrm{d}x.$

(9) $\int x\left(1-\sqrt{x}\right)^3\,\mathrm{d}x.$

(10) $\int \frac{\left(\sqrt{x}-2\right)^3}{3x}\,\mathrm{d}x.$

(11) $\int x^3-\frac{1}{\sqrt{x^5}}+\cos x\,\mathrm{d}x.$

(12) $\int \frac{x^3-3x^2+5x-6}{x-2}\,\mathrm{d}x.$

(13) $\int \frac{\sqrt{x\sqrt{x^5}}-\sqrt{x^3\sqrt{x}}}{x}\,\mathrm{d}x.$

(14) $\int \left(\frac{x+1}{\sqrt{x}}\right)^3\,\mathrm{d}x.$

(15) $\int \frac{\sqrt{x\sqrt{x^3}}-\sqrt{x^3\sqrt{x}}}{x}\,\mathrm{d}x.$

(16) $\int \frac{x^2+x-2}{x+2}\,\mathrm{d}x.$

(17) $\int \frac{\left(x-\frac{1}{x}\right)^3}{x}\,\mathrm{d}x.$

(18) $\int \sin x+\sqrt{x}+\frac{1}{x^4}\,\mathrm{d}x.$

(19) $\int \frac{\left(1-x^3\right)^2}{3x^4}\,\mathrm{d}x.$

(20) $\int \frac{\sqrt{x\sqrt{x^5}}-\sqrt{x\sqrt{x}}}{x}\,\mathrm{d}x.$

(21) $\int \frac{\left(2-3x^2\right)^3}{x^2}\,\mathrm{d}x.$

(22) $\int \left(\sqrt{x}-\sqrt{x^3}\right)^2\,\mathrm{d}x.$

(23) $\int \frac{\left(1-2x^2\right)^2}{\sqrt{x}}\,\mathrm{d}x.$

(24) $\int \frac{x^3-2x^2+3x-2}{x-1}\,\mathrm{d}x.$

(25) $\int 2-\mathrm{e}^x+(x-1)^2\,\mathrm{d}x.$

(26) $\int \frac{\sqrt[3]{x\sqrt{x^5}}-\sqrt{x\sqrt{x}}}{x}\,\mathrm{d}x.$

(27) $\int \frac{\cos(2x)}{\sin^2(x)}\,\mathrm{d}x$

(28) $\int \frac{(x+1)(x-1)}{x^2+1}\,\mathrm{d}x.$

(29) $\int x^{-3}+\sqrt{x^3}+\frac{1}{\cos^2 x}+2\,\mathrm{d}x.$

(30) $\int \left(1-\sqrt{x^3\sqrt[3]{x^2\sqrt{x}}}\right)^2\,\mathrm{d}x.$

Integrujte

(1) $\int 1 - \sqrt{x^5\sqrt{x^3\sqrt{x}}}\,\mathrm{d}x = x - \frac{8\sqrt[8]{x^{35}}}{35} + c.$

(2) $\int \mathrm{tg}^2\, x\,\mathrm{d}x = \mathrm{tg}\, x - x + c.$

(3) $\int \left(\frac{1}{x} - \sqrt{x}\right)^2 \mathrm{d}x = -\frac{1}{x} - 4\sqrt{x} + \frac{x^2}{2} + c.$

(4) $\int \frac{\cos(2x)}{\cos^2(x)}\,\mathrm{d}x = 2x - \mathrm{tg}(x) + c.$

(5) $\int \mathrm{cotg}^2\, x\,\mathrm{d}x = -\mathrm{cotg}\, x - x + c.$

(6) $\int \frac{x^2}{1+x^2}\,\mathrm{d}x = x - \mathrm{arctg}\, x + c.$

(7) $\int \frac{\left(1-2x^2\right)^2}{\sqrt[3]{x}}\,\mathrm{d}x = \frac{3\sqrt[3]{x^2}}{2} - \frac{12\sqrt[3]{x^{11}}}{11} + \frac{12\sqrt{x^{14}}}{14} + c$

(8) $\int \left(1 - \frac{1}{x}\right)^3 \mathrm{d}x = \frac{1}{2x^2} + x - \frac{3}{x} - 3\ln(x) + c.$

(9) $\int x\left(1-\sqrt{x}\right)^3 \mathrm{d}x = -\frac{2x^{7/2}}{7} - \frac{6x^{5/2}}{5} + x^3 + \frac{x^2}{2} + c.$

(10) $\int \frac{\left(\sqrt{x}-2\right)^3}{3x}\,\mathrm{d}x = \frac{2x^{3/2}}{9} - 2x + 8\sqrt{x} - \frac{8\ln(x)}{3} + c.$

(11) $\int x^3 - \frac{1}{\sqrt{x^5}} + \cos x\,\mathrm{d}x = \frac{x^4}{4} + \frac{2}{3\sqrt{x^3}} + \sin x + c.$

(12) $\int \frac{x^3 - 3x^2 + 5x - 6}{x-2}\,\mathrm{d}x = \frac{x^3}{3} - \frac{x^2}{2} + 3x + c.$

(13) $\int \frac{\sqrt{x\sqrt{x^5}} - \sqrt{x^3\sqrt{x}}}{x}\,\mathrm{d}x = c.$

(14) $\int \left(\frac{x+1}{\sqrt{x}}\right)^3 \mathrm{d}x = \frac{2x^{5/2}}{5} + 2x^{3/2} + 6\sqrt{x} - \frac{2}{\sqrt{x}} + c.$

(15) $\int \frac{\sqrt{x\sqrt{x^3}} - \sqrt{x^3\sqrt{x}}}{x}\,\mathrm{d}x = \frac{4\sqrt[4]{x^5}}{5} - \frac{4\sqrt[4]{x^7}}{7} + c.$

(16) $\int \frac{x^2+x-2}{x+2}\,\mathrm{d}x = \frac{x^2}{2} - x + c.$

(17) $\int \frac{\left(x-\frac{1}{x}\right)^3}{x}\,\mathrm{d}x = \frac{x^3}{3} - 3x + \frac{1}{3x^3} - \frac{3}{x} + c.$

(18) $\int \sin x + \sqrt{x} + \frac{1}{x^4}\,\mathrm{d}x = -\cos x + \frac{2\sqrt{x^3}}{3} - \frac{1}{3x^3} + c.$

(19) $\int \frac{\left(1-x^3\right)^2}{3x^4}\,\mathrm{d}x = \frac{x^3}{9} - \frac{1}{9x^3} - \frac{2\ln(x)}{3} + c.$

(20) $\int \frac{\sqrt{x\sqrt{x^5}} - \sqrt{x\sqrt{x}}}{x}\,\mathrm{d}x = \frac{4\sqrt[4]{x^7}}{7} - \frac{4\sqrt[4]{x^3}}{3} + c.$

(21) $\int \frac{\left(2-3x^2\right)^3}{x^2}\,\mathrm{d}x = -\frac{8}{x} - 36x + 18x^3 - \frac{27x^5}{5} + c.$

(22) $\int \left(\sqrt{x} - \sqrt{x^3}\right)^2\,\mathrm{d}x = \frac{x^2}{2} - \frac{2x^3}{3} + \frac{x^4}{4} + c.$

(23) $\int \frac{\left(1-2x^2\right)^2}{\sqrt{x}}\,\mathrm{d}x = 2\sqrt{x} - \frac{8\sqrt{x^5}}{5} + \frac{8\sqrt{x^9}}{9} + c.$

(24) $\int \frac{x^3-2x^2+3x-2}{x-1}\,\mathrm{d}x = \frac{x^3}{3} - \frac{x^2}{2} + 2x + c.$

(25) $\int 2 - \mathrm{e}^x + (x-1)^2\,\mathrm{d}x = -\mathrm{e}^x + \frac{x^3}{3} - x^2 + 3x.$

(26) $\int \frac{\sqrt[3]{x\sqrt{x^5}} - \sqrt{x\sqrt{x}}}{x}\,\mathrm{d}x = \frac{2\sqrt{x^3}}{3} - \frac{4\sqrt[4]{x^3}}{3} + c.$

(27) $\int \frac{\cos(2x)}{\sin^2(x)}\,\mathrm{d}x = -2x - \operatorname{cotg}(x) + c.$

(28) $\int \frac{(x+1)(x-1)}{x^2+1}\,\mathrm{d}x = x - 2\operatorname{arctg} x + c.$

(29) $\int x^{-3} + \sqrt{x^3} + \frac{1}{\cos^2 x} + 2\,\mathrm{d}x = -\frac{1}{2x^2} + \frac{2\sqrt{x^5}}{5} + \operatorname{tg} x + 2x + c.$

(30) $\int \left(1 - \sqrt{x^3\sqrt[3]{x^2\sqrt{x}}}\right)^2\,\mathrm{d}x = x - \frac{24\sqrt[12]{x^{35}}}{35} + \frac{6\sqrt[6]{x^{29}}}{29} + c.$