Integrujte

(1) $\int \operatorname{arctg}\left(\frac{x}{2}\right) \mathrm{d}x.$

(2) $\int \sin(2x)\cos(3x)\,\mathrm{d}x.$

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

(4) $\int x \operatorname{arctg}(x)\,\mathrm{d}x.$

(5) $\int \mathrm{e}^{2x}\sin(3x)\,\mathrm{d}x.$

(6) $\int \mathrm{e}^{-x}\cos\left(\frac{x}{2}\right)\mathrm{d}x.$

(7) $\int 2x \sin\left(2-\frac{x}{3}\right)\mathrm{d}x.$

(8) $\int \arcsin(x)\,\mathrm{d}x.$

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

(10) $\int \left(1-2x^2\right)\sin(2x)\,\mathrm{d}x.$

(11) $\int \ln(1-x)\,\mathrm{d}x.$

(12) $\int (3x+2)\cos\left(\frac{x}{2}\right)\mathrm{d}x.$

(13) $\int \arcsin\left(\frac{x}{4}\right)\mathrm{d}x.$

(14) $\int x\,\mathrm{e}^{-x}\,\mathrm{d}x.$

(15) $\int \left(1-x^2\right)\sin(x)\,\mathrm{d}x.$

(16) $\int \operatorname{arctg}(x)\,\mathrm{d}x.$

(17) $\int \ln(x)\,\mathrm{d}x.$

(18) $\int \operatorname{arctg}(2x)\,\mathrm{d}x.$

(19) $\int (1-3x)\cos(x)\,\mathrm{d}x.$

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

(21) $\int (x-4)\sin(x)\,\mathrm{d}x.$

(22) $\int (2x-1)\sin(2x)\,\mathrm{d}x.$

(23) $\int x\sin(x)\,\mathrm{d}x.$

(24) $\int \mathrm{e}^{2x}\left(x^2+1\right)\mathrm{d}x.$

(25) $\int \ln\left(x^3\right)\mathrm{d}x.$

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

(27) $\int \left(x^2-2x+3\right)\sin\left(\frac{x}{3}\right)\mathrm{d}x.$

(28) $\int \cos(\ln(x))\,\mathrm{d}x.$

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

(30) $\int (2-x)\cos\left(1-\frac{x}{2}\right)\mathrm{d}x.$

Integrujte

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

(2) $\int \sin(2x)\cos(3x)\,\mathrm{d}x = \frac{1}{5}\left(2\cos(2x)\cos(3x) + 3\sin(2x)\sin(3x)\right) + c = \frac{\cos(x)}{2} - \frac{1}{10}\cos(5x) + c.$

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

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

(5) $\int \mathrm{e}^{2x}\sin(3x)\,\mathrm{d}x = \frac{1}{13}\mathrm{e}^{2x}(2\sin(3x) - 3\cos(3x)) + c.$

(6) $\int \mathrm{e}^{-x}\cos\left(\frac{x}{2}\right)\mathrm{d}x = \frac{1}{5}\mathrm{e}^{-x}\left(2\sin\left(\frac{x}{2}\right) - 4\cos\left(\frac{x}{2}\right)\right) + c.$

(7) $\int 2x\sin\left(2-\frac{x}{3}\right)\mathrm{d}x = 6x\cos\left(2-\frac{x}{3}\right) + 18\sin\left(2-\frac{x}{3}\right) + c.$

(8) $\int \arcsin(x)\,\mathrm{d}x = \sqrt{1-x^2} + x\arcsin(x) + c.$

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

(10) $\int \left(1-2x^2\right)\sin(2x)\,\mathrm{d}x = \left(x^2-1\right)\cos(2x) - x\sin(2x) + c.$

(11) $\int \ln(1-x)\,\mathrm{d}x = x\ln(1-x) - \left(x + \ln(1-x)\right) + c.$

(12) $\int (3x+2)\cos\left(\frac{x}{2}\right)\mathrm{d}x = 2(3x+2)\sin\left(\frac{x}{2}\right) + 12\cos\left(\frac{x}{2}\right) + c.$

(13) $\int \arcsin\left(\frac{x}{4}\right)\mathrm{d}x = \sqrt{16-x^2} + x\arcsin\left(\frac{x}{4}\right) + c.$

(14) $\int x\,\mathrm{e}^{-x}\,\mathrm{d}x = -(x+1)\mathrm{e}^{-x} + c + c.$

(15) $\int \left(1-x^2\right)\sin(x)\,\mathrm{d}x = \left(x^2-3\right)\cos(x) - 2x\sin(x) + c.$

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

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

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

(19) $\int (1-3x)\cos(x)\,\mathrm{d}x = (1-3x)\sin(x) - 3\cos(x) + c.$

(20) $\int \mathrm{e}^x(1-x)^2\,\mathrm{d}x = \mathrm{e}^x\left(x^2-4x+5\right) + c.$

(21) $\int (x-4)\sin(x)\,\mathrm{d}x = -(x-4)\cos(x) + \sin(x) + c.$

(22) $\int (2x-1)\sin(2x)\,\mathrm{d}x = -\frac{1}{2}(2x-1)\cos(2x) + \frac{1}{2}\sin(2x) + c..$

(23) $\int x\sin(x)\,\mathrm{d}x = -x\cos(x) + \sin(x) + c.$

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

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

(26) $\int \mathrm{e}^{3+\frac{x}{2}}(1-2x)\,\mathrm{d}x = (10-4x)\,\mathrm{e}^{\frac{x}{2}+3} + c.$

(27) $\int \left(x^2-2x+3\right)\sin\left(\frac{x}{3}\right)\mathrm{d}x = \left(-3x^2+6x+45\right)\cos\left(\frac{x}{3}\right) + 18(x-1)\sin\left(\frac{x}{3}\right) + c.$

(28) $\int \cos(\ln(x))\,\mathrm{d}x = \frac{1}{2}x\sin(\ln(x)) + \frac{1}{2}x\cos(\ln(x)) + c.$

(29) $\int x^2\cos(x)\,\mathrm{d}x = \left(x^2-2\right)\sin(x) + 2x\cos(x) + c.$

(30) $\int (2-x)\cos\left(1-\frac{x}{2}\right)\mathrm{d}x = -2(2-x)\sin\left(1-\frac{x}{2}\right) - 4\cos\left(1-\frac{x}{2}\right) + c.$