Całki nieoznaczone - zadania

$$\int e^x \, \mathrm{d}x \quad (1)$$

$$\int \ln(x) \, \mathrm{d}x \quad (2)$$

$$\int \sqrt{x} \, \mathrm{d}x \quad (3)$$

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

$$\int e^{2x} \, \mathrm{d}x \quad (5)$$

$$\int e^{x/2} \, \mathrm{d}x \quad (6)$$

$$\int \ln^2(x) \, \mathrm{d}x \quad (7)$$

$$\int 2^{\ln(x)} \, \mathrm{d}x \quad (8)$$

$$\int \ln(x+1) \, \mathrm{d}x \quad (9)$$

$$\int \sqrt{x+1} \, \mathrm{d}x \quad (10)$$

$$\int e^{\sqrt{x}} \, \mathrm{d}x \quad (11)$$

$$\int \sqrt[4]{x} \, \mathrm{d}x \quad (12)$$

$$\int 2^{\sqrt{x}} \, \mathrm{d}x \quad (13)$$

$$\int 2^{2x} \, \mathrm{d}x \quad (14)$$

$$\int 2^{x/2} \, \mathrm{d}x \quad (15)$$

$$\int x^{\frac{1}{\ln(2)}} \, \mathrm{d}x \quad (16)$$

$$\int \ln(1-x) \, \mathrm{d}x \quad (17)$$

$$\int \sqrt{1-x} \, \mathrm{d}x \quad (18)$$

$$\int e^x x \, \mathrm{d}x \quad (19)$$

$$\int x \ln(x) \, \mathrm{d}x \quad (20)$$

$$\int \frac{1}{x \ln(x)} \, \mathrm{d}x \quad (21)$$

$$\int x^{3/2} \, \mathrm{d}x \quad (22)$$

$$\int 2^x x \, \mathrm{d}x \quad (23)$$

$$\int \frac{\ln(x)}{x \ln(2)} \, \mathrm{d}x \quad (24)$$

$$\int \pi^x \, \mathrm{d}x \quad (25)$$

$$\int \frac{1}{e^x + 1} \, \mathrm{d}x \quad (26)$$

$$\int \sqrt{e^x + 1} \, \mathrm{d}x \quad (27)$$

$$\int e^{4x} \, \mathrm{d}x \quad (28)$$

$$\int e^{x/4} \, \mathrm{d}x \quad (29)$$

$$\int \frac{e^{-x}}{\ln(2)} \, \mathrm{d}x \quad (30)$$

$$\int e^{\frac{x}{\ln(2)}} \, \mathrm{d}x \quad (31)$$

$$\int \ln^4(x) \, \mathrm{d}x \quad (32)$$

$$\int 2^{2\ln(x)} \, \mathrm{d}x \quad (33)$$

$$\int 2^{\frac{\ln(x)}{2}} \, \mathrm{d}x \quad (34)$$

$$\int \ln(-x-1) \, \mathrm{d}x \quad (35)$$

$$\int \sqrt{-x-1} \, \mathrm{d}x \quad (36)$$

$$\int \ln^2(x+1) \, \mathrm{d}x \quad (37)$$

$$\int 2^{\ln(x+1)} \, \mathrm{d}x \quad (38)$$

$$\int \ln(x+2) \, \mathrm{d}x \quad (39)$$

$$\int \sqrt{x+2} \, \mathrm{d}x \quad (40)$$

$$\int e^{\sqrt{x+1}} \, \mathrm{d}x \quad (41)$$

$$\int \sqrt[4]{x+1} \, \mathrm{d}x \quad (42)$$

$$\int 2^{\sqrt{x+1}}\,\mathrm{d}x \quad (43)$$

$$\int (x+1)^{\frac{1}{\ln(2)}}\,\mathrm{d}x \quad (44)$$

$$\int \ln\left(\frac{1}{x}+1\right)\,\mathrm{d}x \quad (45)$$

$$\int \frac{x}{x+1}\,\mathrm{d}x \quad (46)$$

$$\int \sqrt{\frac{x+1}{x}}\,\mathrm{d}x \quad (47)$$

$$\int \ln\left(x^2+1\right)\,\mathrm{d}x \quad (48)$$

$$\int \sqrt{x^2+1}\,\mathrm{d}x \quad (49)$$

$$\int x^{\frac{2}{\ln(2)}}\,\mathrm{d}x \quad (50)$$

$$\int x^{\frac{\sqrt{x}}{2}}\,\mathrm{d}x \quad (51)$$

$$\int e^{2\sqrt{x}}\,\mathrm{d}x \quad (52)$$

$$\int e^{\frac{\sqrt{x}}{2}}\,\mathrm{d}x \quad (53)$$

$$\int \ln\left(\sqrt{x}+1\right)\,\mathrm{d}x \quad (54)$$

$$\int \frac{1}{\sqrt{x}+1}\,\mathrm{d}x \quad (55)$$

$$\int \sqrt{\sqrt{x}+1}\,\mathrm{d}x \quad (56)$$

$$\int e^{\sqrt[4]{x}}\,\mathrm{d}x \quad (57)$$

$$\int \sqrt[8]{x}\,\mathrm{d}x \quad (58)$$

$$\int 2^{\sqrt[4]{x}}\,\mathrm{d}x \quad (59)$$

$$\int \frac{1}{\sqrt{x}\ln(2)}\,\mathrm{d}x \quad (60)$$

$$\int 2^{2\sqrt{x}}\,\mathrm{d}x \quad (61)$$

$$\int 2^{\frac{\sqrt{x}}{2}}\,\mathrm{d}x \quad (62)$$

$$\int x^{\frac{1}{2\ln(2)}}\,\mathrm{d}x \quad (63)$$

$$\int 2^{x\ln(2)}\,\mathrm{d}x \quad (64)$$

$$\int \frac{1}{2^x+1}\,\mathrm{d}x \quad (65)$$

$$\int \sqrt{2^x+1}\,\mathrm{d}x \quad (66)$$

$$\int 2^{4x}\,\mathrm{d}x \quad (67)$$

$$\int 2^{x/4}\,\mathrm{d}x \quad (68)$$

$$\int \frac{2^{-x}}{\ln(2)}\,\mathrm{d}x \quad (69)$$

Odpowiedzi

$$e^x \tag{1}$$

$$x\ln(x) - x \tag{2}$$

$$\frac{2x^{3/2}}{3} \tag{3}$$

$$\frac{2^x}{\ln(2)} \tag{4}$$

$$\frac{e^{2x}}{2} \tag{5}$$

$$2e^{x/2} \tag{6}$$

$$2x + x\ln^2(x) - 2x\ln(x) \tag{7}$$

$$\frac{x2^{\ln(x)}}{1+\ln(2)} \tag{8}$$

$$-x + x\ln(x+1) + \ln(x+1) \tag{9}$$

$$\frac{2}{3}(x+1)^{3/2} \tag{10}$$

$$e^{\sqrt{x}}\left(2\sqrt{x} - 2\right) \tag{11}$$

$$\frac{4x^{5/4}}{5} \tag{12}$$

$$2^{\sqrt{x}}\left(\frac{2\sqrt{x}}{\ln(2)} - \frac{2}{\ln^2(2)}\right) \tag{13}$$

$$\frac{4^x}{\ln(4)} \tag{14}$$

$$\frac{2^{\frac{x}{2}+1}}{\ln(2)} \tag{15}$$

$$\frac{x^{1+\frac{1}{\ln(2)}}}{1+\frac{1}{\ln(2)}} \tag{16}$$

$$-x + x\ln(1-x) - \ln(1-x) \tag{17}$$

$$-\frac{2}{3}(1-x)^{3/2} \tag{18}$$

$$e^x(x-1) \tag{19}$$

$$\frac{1}{2}x^2\ln(x) - \frac{x^2}{4} \tag{20}$$

$$\ln(\ln(x)) \tag{21}$$

$$\frac{2x^{5/2}}{5} \tag{22}$$

$$\frac{2^x(x\ln(2)-1)}{\ln^2(2)} \tag{23}$$

$$\frac{\ln^2(x)}{2\ln(2)} \tag{24}$$

$$\frac{\pi^x}{\ln(\pi)} \tag{25}$$

$$x - \ln\left(e^x+1\right) \tag{26}$$

$$2\sqrt{e^x+1} - 2\tanh^{-1}\left(\sqrt{e^x+1}\right) \tag{27}$$

$$\frac{e^{4x}}{4} \tag{28}$$

$$4e^{x/4} \tag{29}$$

$$-\frac{e^{-x}}{\ln(2)} \tag{30}$$

$$\ln(2)e^{\frac{x}{\ln(2)}} \tag{31}$$

$$24x + x\ln^4(x) - 4x\ln^3(x) + 12x\ln^2(x) - 24x\ln(x) \tag{32}$$

$$\frac{x2^{2\ln(x)}}{1+2\ln(2)} \tag{33}$$

$$\frac{x2^{\frac{\ln(x)}{2}+1}}{2+\ln(2)} \tag{34}$$

$$-x + x\ln(-x-1) + \ln(x+1) \tag{35}$$

$$-\frac{2}{3}(-x-1)^{3/2} \tag{36}$$

$$2x + (x+1)\ln^2(x+1) - 2(x+1)\ln(x+1) \tag{37}$$

$$\frac{(x+1)2^{\ln(x+1)}}{1+\ln(2)} \tag{38}$$

$$-x + x\ln(x+2) + 2\ln(x+2) \tag{39}$$

$$\frac{2}{3}(x+2)^{3/2} \tag{40}$$

$$\frac{2e^{\sqrt{x+1}}\left(x - \sqrt{x+1} + 1\right)}{\sqrt{x+1}} \tag{41}$$

$$\frac{4}{5}(x+1)^{5/4} \tag{42}$$

$$\frac{2^{\sqrt{x+1}+1}\left(-\sqrt{x+1} + x\ln(2) + \ln(2)\right)}{\sqrt{x+1}\ln^2(2)} \tag{43}$$

$$\frac{\ln(2)(x+1)^{1+\frac{1}{\ln(2)}}}{1+\ln(2)} \tag{44}$$

$$x\ln\left(\frac{1}{x}+1\right) + \ln(x+1) \tag{45}$$

$$x - \ln(x+1) \tag{46}$$

$$\sqrt{\frac{1}{x}+1}x+\frac{1}{2}\ln\left(\left(2\sqrt{\frac{1}{x}+1}+2\right)x+1\right) \tag{47}$$

$$x\ln\left(x^2+1\right)-2x+2\tan^{-1}(x) \tag{48}$$

$$\frac{1}{2}\left(\sqrt{x^2+1}x+\sinh^{-1}(x)\right) \tag{49}$$

$$\frac{x^{1+\frac{2}{\ln(2)}}}{1+\frac{2}{\ln(2)}} \tag{50}$$

$$\frac{2x^{\frac{1}{2}\left(\sqrt{x}+2\right)}}{\sqrt{x}+2} \tag{51}$$

$$e^{2\sqrt{x}}\left(\sqrt{x}-\frac{1}{2}\right) \tag{52}$$

$$e^{\frac{\sqrt{x}}{2}}\left(4\sqrt{x}-8\right) \tag{53}$$

$$-\frac{x}{2}+\sqrt{x}+(x-1)\ln\left(\sqrt{x}+1\right) \tag{54}$$

$$2\sqrt{x}-2\ln\left(\sqrt{x}+1\right) \tag{55}$$

$$\frac{4}{15}\sqrt{\sqrt{x}+1}\left(3x+\sqrt{x}-2\right) \tag{56}$$

$$e^{\sqrt[4]{x}}\left(4x^{3/4}-12\sqrt{x}+24\sqrt[4]{x}-24\right) \tag{57}$$

$$\frac{8x^{9/8}}{9} \tag{58}$$

$$\frac{2^{\sqrt[4]{x}+2}\left(x^{3/4}\ln^3(2)-3\sqrt{x}\ln^2(2)+\sqrt[4]{x}\ln(64)-6\right)}{\ln^4(2)} \tag{59}$$

$$\frac{2\sqrt{x}}{\ln(2)} \tag{60}$$

$$4^{\sqrt{x}}\left(\frac{2\sqrt{x}}{\ln(4)}-\frac{2}{\ln^2(4)}\right) \tag{61}$$

$$2^{\frac{\sqrt{x}}{2}}\left(\frac{4\sqrt{x}}{\ln(2)}-\frac{8}{\ln^2(2)}\right) \tag{62}$$

$$\frac{x^{1+\frac{1}{\ln(4)}}}{1+\frac{1}{\ln(4)}} \tag{63}$$

$$\frac{2^{x\ln(2)}}{\ln^2(2)} \tag{64}$$

$$x-\frac{\ln\left(2^x+1\right)}{\ln(2)} \tag{65}$$

$$\frac{2\left(\sqrt{2^x+1}-\tanh^{-1}\left(\sqrt{2^x+1}\right)\right)}{\ln(2)} \tag{66}$$

$$\frac{16^x}{\ln(16)} \tag{67}$$

$$\frac{2^{\frac{x}{4}+2}}{\ln(2)} \tag{68}$$

$$-\frac{2^{-x}}{\ln^2(2)} \tag{69}$$