

Kalkulatu funtzio hauen deribatuak:

$$1.- f(x) = x^3 - \sqrt{2x} + \frac{3}{x}$$

$$2.- f(x) = \sin(x^2 + 5x - 1)$$

$$3.- f(x) = \sqrt{\sin x} + \sin(\sqrt{x})$$

$$4.- f(x) = \sin^2(x^3 + 1)$$

$$5.- f(x) = \ln(\ln x)$$

$$6.- f(x) = (x^2 - \sqrt{x} + \sin x)^4$$

$$7.- f(x) = \ln\left(\frac{1+\sin x}{1-\sin x}\right)$$

$$8.- f(x) = \sqrt{x\sqrt{x+1}}$$

$$9.- f(x) = \frac{1-x}{1+x}$$

$$10.- f(x) = \ln\left(\frac{1-x}{1+x}\right)$$

$$11.- f(x) = \sqrt{\frac{1-x}{1+x}}$$

$$12.- f(x) = \frac{1-\tan x}{1+\tan x}$$

$$13.- f(x) = \ln\left(\sqrt{e^{\tan x}}\right)$$

$$14.- f(x) = \sqrt{3^{x+1}}$$

$$15.- f(x) = \ln(\sin x \cos x)^2$$

$$16.- f(x) = \sin(\sqrt{x+1}) \cos(\sqrt{x-1})$$

$$17.- f(x) = 7^{\sin(x^2+1)}$$

$$18.- f(x) = \cos^2\left(\sqrt{x+(3-x)^2}\right)$$

$$19.- f(x) = \frac{x^3}{(x+1)^2}$$

$$20.- f(x) = \left(\frac{x^2+1}{x}\right)^3$$

$$21.- f(x) = \frac{1}{\sin x}$$

$$22.- f(x) = \frac{\sin x}{\cos x}$$

$$23.- f(x) = e^{4x}(x-1)$$

$$24.- f(x) = \frac{(1-x)^2}{e^x}$$

$$25.- f(x) = \sqrt{2^x}$$

$$26.- f(x) = \ln(2x-1)$$

$$27.- f(x) = \ln(x^2-1)$$

$$28.- f(x) = \ln(\sqrt{x-1})$$

$$29.- f(x) = \frac{\ln x}{e^x}$$

$$30.- f(x) = \sin^2(x^2)$$

$$31.- f(x) = \sin(x^2) \cos^2 x$$

$$32.- f(x) = \frac{\sin^2 x}{1-\cos^2 x}$$

$$33.- f(x) = e^{x^2+1}$$

$$34.- f(x) = \cos^3(2x+1)^2$$

$$35.- f(x) = \ln\left(\frac{1}{x}\right)$$

$$36.- f(x) = \sqrt[3]{\sin(x^2)}$$

$$37.- f(x) = \sqrt{\frac{1+2x}{1-2x}}$$

$$38.- f(x) = \sqrt{x\sqrt{x}}$$

$$39.- f(x) = \ln\left(\sqrt{\frac{x}{x+1}}\right)$$

$$40.- f(x) = \ln(\sin(\sqrt{e^x}))$$

Soluzioak:

$$1.- f'(x) = 3x^2 - \frac{1}{\sqrt{2x}} - \frac{3}{x^2}$$

$$2.- f'(x) = (2x + 5) \cos(x^2 + 5x - 1)$$

$$3.- f'(x) = \frac{\cos x}{2\sqrt{\sin x}} + \frac{\cos \sqrt{x}}{2\sqrt{x}}$$

$$4.- f'(x) = 6x^2 \sin(x^3 + 1) \cos(x^3 + 1)$$

$$5.- f'(x) = \frac{1}{x \ln x}$$

$$6.- f'(x) = 4(x^2 - \sqrt{x} + \sin x)^3 \left(2x - \frac{1}{2\sqrt{x}} + \cos x\right)$$

$$7.- f'(x) = \frac{2}{\cos x}$$

$$8.- f'(x) = \frac{3x+2}{4\sqrt{x^2(x+1)^3}}$$

$$9.- f'(x) = -\frac{2}{(x+1)^2}$$

$$10.- f'(x) = \frac{2}{x^2-1}$$

$$11.- f'(x) = \frac{-1}{(x+1)^2} \sqrt{\frac{1+x}{1-x}}$$

$$12.- f'(x) = \frac{-2}{(\cos x + \sin x)^2}$$

$$13.- f'(x) = \frac{1}{2\cos^2 x}$$

$$14.- f'(x) = \frac{1}{2} (\ln 3) \sqrt{3^{x+1}}$$

$$15.- f'(x) = \frac{1}{\cos^2 x \sin^2 x} (2 \cos^3 x \sin x - 2 \cos x \sin^3 x)$$

$$16.- f'(x) = \frac{1}{2\sqrt{x+1}} \cos(\sqrt{x-1}) \cos(\sqrt{x+1}) - \frac{1}{2\sqrt{x-1}} \sin(\sqrt{x-1}) \sin(\sqrt{x+1})$$

$$17.- f'(x) = 2x(\ln 7 \cos(x^2 + 1))7^{\sin(x^2+1)}$$

$$18.- f'(x) = -\frac{4}{3} \frac{2x-5}{\sqrt[3]{x+(3-x)^2}} \cos\left(\sqrt[3]{x+(3-x)^2}\right) \sin\left(\sqrt[3]{x+(3-x)^2}\right)$$

$$19.- f'(x) = \frac{x^2(x+3)}{(x+1)^3}$$

$$20.- f'(x) = \frac{3(x^2+1)^2(x^2-1)}{x^4}$$

$$21.- f'(x) = -\frac{\cos x}{\sin^2 x}$$

$$22.- f'(x) = \frac{1}{\cos^2 x}$$

$$23.- f'(x) = e^{4x} + 4(x-1)e^{4x}$$

$$24.- f'(x) = \frac{2}{e^x}(x-1) - \frac{1}{e^x}(1-x)^2$$

$$25.- f'(x) = \frac{1}{2}(\ln 2)\sqrt{2^x}$$

$$26.- f'(x) = \frac{2}{2x-1}$$

$$27.- f'(x) = \frac{2x}{x^2-1}$$

$$28.- f'(x) = \frac{1}{2(x-1)}$$

$$29.- f'(x) = \frac{1}{xe^x} - \frac{\ln x}{e^x}$$

$$30.- f'(x) = 4x \cos(x^2) \sin(x^2)$$

$$31.- f'(x) = 2x \cos^2 x \cos(x^2) - 2 \cos x \sin x \sin(x^2)$$

$$32.- f'(x) = 0$$

$$33.- f'(x) = 2xe^{x^2+1}$$

$$34.- f'(x) = -12(2x+1) \cos^2(2x+1)^2 \sin(2x+1)^2$$

$$35.- f'(x) = -\frac{1}{x}$$

$$36.- f'(x) = \frac{2}{3}x \frac{\cos(x^2)}{\sin(x^2)} \sqrt[3]{\sin(x^2)}$$

$$37.- f'(x) = \sqrt{\frac{1-2x}{1+2x}} \frac{2}{(1-2x)^2}$$

$$38.- f'(x) = \frac{3}{4} \frac{\sqrt[4]{x^3}}{x}$$

$$39.- f'(x) = \frac{1}{2x(x+1)}$$

$$40.- f'(x) = \frac{\sqrt{e^x}}{2} \frac{\cos(\sqrt{e^x})}{\sin(\sqrt{e^x})}$$