Osnovni izreki začetka analize

Anton Luka Šijanec

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$$\frac{df}{dx} = f'(x_0) = \lim_{h\to 0} \frac{f(x_0+h)-f(x_0)}{h} = \tan\varphi$$

$$(f(x)+g(x))' = f'(x)+g'(x)$$

$$(f(x)\cdot g(x))' = f'(x)\cdot g(x) + f(x)\cdot g'(x)$$

$$(c\cdot f(x))' = c\cdot f'(x)$$

$$\left(\frac{f(x)}{g(x)}\right)' = \frac{f'(x)\cdot g(x) - f(x)\cdot g'(x)}{g^2(x)}$$

$$p \perp q \Rightarrow k_p = -k_q^{-1} \ ; \quad p \parallel q \Rightarrow k_p = k_q$$

$$(x^r)' = r\cdot x^{r-1}, x\in\mathbb{R}$$

$$\tan\varphi = \left|\frac{k_2-k_1}{1+k_2k_1}\right|$$

$$(g\circ f)'(x) = [g(f(x))]' = g(f(x))'\cdot f'(x)$$

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

$$\sin\alpha - \sin\beta = 2\sin\frac{\alpha-\beta}{2}\cdot\cos\frac{\alpha+\beta}{2}$$

$$\lim_{x\to 0}\frac{\sin x}{x} = 1;\ \sin^2 x + \cos^2 x = 1$$

$$1+\tan^2 x = \cos^{-2} x;\ 1+\cot^2 x = \sin^{-2} x$$

$$\arcsin' x = \frac{1}{\sqrt{1-x^2}} = -\arccos' x$$

$$\arctan' x = \frac{1}{1+x^2} = -\mathrm{arccot}' x$$

$$\log_a(bc) = \log_a b + \log_a c;\ log_a b^r = r\cdot\log_a b;\ \log_a x = \frac{\log_b x}{\log_b a}$$

$$\log_a 1 = 0$$

$$x>0 \land a>0 \Rightarrow \log_{1/a} x = -\log_a x$$

$$y = log_a x \Leftrightarrow x = a^b;\ x = a^{\log_a x}$$

$$\lim_{|t|\to\infty}\left(1+t^{-1}\right)^t = e;\ t\in\mathbb{R}$$

$$(\log_a x)' = \frac{\log_a e}{x} = \frac{1}{x\cdot\ln a};\ (\ln x)' = x^{-1}$$

$$(a^x)' = a^x\ln a \Rightarrow (e^x)' = e^x$$

$$f(x_0+h) \approx f(x_0) + f'(x_0)\cdot h$$

$$x_{1,2} = \frac{-b\pm\sqrt{b^2-4ac}}{2a}$$

$\sin' x = \cos x;\ \cos' x = -\sin x;\ \tan' x = \cos^{-2} x;\ \cot' x = -\sin^{-2} x$ Za možne napake ne odgovarjam. Srečno!