ZÁKLADNÉ VZORCE

1D. $(c)' = 0$

2D. $(x^a)' = ax^{a-1}$

3D. $(\ln x)' = \frac{1}{x}$

4D. $(e^x)' = e^x$

5D. $(a^x)' = a^x \ln a$

6D. $(\sin ax)' = a \cos ax$

7D. $(\cos ax)' = -a \sin ax$

8D. $(\operatorname{tg} x)' = \frac{1}{\cos^2 x}$

9D. $(\operatorname{cotg} x)' = -\frac{1}{\sin^2 x}$

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

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

12D. $(\operatorname{arctg} x)' = \frac{1}{1+x^2}$

13D. $(\operatorname{arccotg} x)' = -\frac{1}{1+x^2}$

14D. $(cf(x))' = cf'(x)$

15D. $(f(x) + g(x))' = f'(x) + g'(x)$

16D. $(f(x).g(x))' = f'(x).g(x) + f(x).g'(x)$

17D. $\left(\frac{f(x)}{g(x)}\right)' = \frac{f'(x).g(x) - f(x).g'(x)}{g^2 x}$

Trigonometrické vzorce

1T. $\sin^2 x + \cos^2 x = 1$

2T. $\sin 2x = 2 \sin x \cos x$

3T. $\cos 2x = \cos^2 x - \sin^2 x$

4T. $\cos^2 x = \frac{1 + \cos 2x}{2}$

5T. $\sin^2 x = \frac{1 - \cos 2x}{2}$

6T. $\cos(-x) = \cos x$

7T. $\sin(-x) = -\sin x$

Základné vzorce

1Z. $a^2 - b^2 = (a - b)(a + b)$

2Z. $a^3 + b^3 = (a + b)(a^2 - ab + b^2)$

3Z. $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$

1I. $\int a \, dx = ax + C$

2I. $\int x^a \, dx = \frac{x^{a+1}}{a+1} + C$ pre $a \neq -1$

3I. $\int \frac{1}{x} \, dx = \ln|x| + C$

4I. $\int e^x \, dx = e^x + C$

5I. $\int a^x \, dx = \frac{a^x}{\ln a} + C$

6I. $\int \cos ax \, dx = \frac{\sin ax}{a} + C$

7I. $\int \sin ax \, dx = -\frac{\cos ax}{a} + C$

8I. $\int \frac{1}{\cos^2 x} \, dx = \operatorname{tg} x + C$

9I. $\int \frac{1}{\sin^2 x} \, dx = -\operatorname{cotg} x + C$

10I. $\int \frac{1}{\sqrt{1-x^2}} \, dx = \arcsin x + C$

11I. $\int \frac{1}{\sqrt{1-x^2}} \, dx = -\arccos x + C$

12I. $\int \frac{1}{a^2+x^2} \, dx = \frac{1}{a} \operatorname{arctg} \frac{x}{a} + C$

13I. $\int \frac{1}{1+x^2} \, dx = -\operatorname{arccotg} x + C$

14I. $\int cf(x) \, dx = c \int f(x) \, dx + C$

15I. $\int (f(x) + g(x))dx = \int f(x)dx + \int g(x)dx$

16I. $\int u'v = u.v - \int uv'$

17I. $\int \frac{dx}{\sqrt{x^2+k}} \, dx = \ln|x + \sqrt{x^2 + k}| + C$

18I. $\int \frac{1}{a^2-x^2} \, dx = \frac{1}{2a} \ln\left|\frac{a+x}{a-x}\right| + C$

19I. $\int \frac{1}{\sqrt{a^2-x^2}} \, dx = \arcsin \frac{x}{a} + C$

20I. $\int \frac{f'(x)}{f(x)} \, dx = \ln|f(x)| + C$

21I. $\int_a^b f(x) \, dx = F(b) - F(a)$

kde $F'(x) = f(x)$

Logaritmické funkcie (pre $a > 0, a \neq 1$)

1L. $\log_a(x.y) = \log_a x + \log_a y$

2L. $\log_a \frac{x}{y} = \log_a x - \log_a y$

3L. $\log_a x^y = y \log_a x$