Правила диференціювання

1. $(Cu)' = C \cdot (u)'$

2. $(u \pm v)' = u' \pm v'$

3. $(u \cdot v)' = u'v + uv'$

4. $\left(\dfrac{u}{v}\right)' = \dfrac{u'v - uv'}{v^2}$

Таблиця похідних

1. $c' = 0, \; c = \text{const}$

2. $\left(x^n\right)' = nx^{n-1}$

3. $\left(a^x\right)' = a^x \cdot \ln a$

4. $\left(e^x\right)' = e^x$

5. $\left(\log_a x\right)' = \dfrac{1}{x \ln a}$

6. $\left(\ln x\right)' = \dfrac{1}{x}$

7. $\left(\sin x\right)' = \cos x$

8. $\left(\cos x\right)' = -\sin x$

9. $\left(\sqrt{x}\right)' = \dfrac{1}{2\sqrt{x}}$

10. $\left(\text{tg}x\right)' = \dfrac{1}{\cos^2 x}$

11. $\left(\text{ctg}x\right)' = -\dfrac{1}{\sin^2 x}$

12. $\left(\arcsin x\right)' = \dfrac{1}{\sqrt{1-x^2}}$

13. $\left(\arccos x\right)' = -\dfrac{1}{\sqrt{1-x^2}}$

14. $\left(\text{arctg}x\right)' = \dfrac{1}{1+x^2}$

15. $\left(\text{arcctg}x\right)' = -\dfrac{1}{1+x^2}$

16. $\left(\text{sh}\,x\right)' = \text{ch}\,x$

17. $\left(\text{ch}\,x\right)' = \text{sh}\,x$

18. $\left(\text{th}\,x\right)' = \dfrac{1}{\text{ch}^2 x}$

19. $\left(\text{cth}\,x\right)' = -\dfrac{1}{\text{sh}^2 x}$