Правила дифференцирования

$$(Cu)' = Cu'$$

$$(u + v)' = u' + v'$$

$$(uv)' = u'v + uv'$$

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

Таблица производных

1. $C' = 0$

2. $x' = 1$

3. $(u^n)' = nu^{n-1}u'$

4. $(e^u)' = e^u\, u'$

5. $(a^u)' = a^u \ln a\, u'$

6. $(\ln u)' = \dfrac{1}{u}u'$

7. $(\log_a u)' = \dfrac{1}{u \ln a}u'$

8. $(\sin u)' = \cos u \cdot u'$

9. $(\cos u)' = -\sin u \cdot u'$

10. $(\operatorname{tg}\ u)' = \dfrac{1}{\cos^2 u}u'$

11. $(\operatorname{ctg}\ u)' = -\dfrac{1}{\sin^2 u}u'$

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

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

14. $(\operatorname{arctg}\ u)' = \dfrac{1}{1 + u^2}u'$

15. $(\operatorname{arcctg}\ u)' = -\dfrac{1}{1 + u^2}u'$