# Таблица основных производных

1. $(c)' = 0$
2. $(x)' = 1$
3. $(u + v - z)' = u' + v' - z'$
4. $(u \cdot v)' = u'v + uv'$
5. $\left(\frac{u}{v}\right)' = \frac{u'v - uv'}{v^2}$
6. $\left(\frac{c}{v}\right)' = -\frac{cv'}{v^2}$
7. $\left(\frac{v}{c}\right)' = \frac{1}{c} \cdot v'$
8. $(cv)' = c \cdot v'$
9. $(u^n)' = n \cdot u^{n-1} \cdot u'$
10. $(e^u)' = e^u \cdot u'$
11. $(\sqrt{u})' = \frac{u'}{2\sqrt{u}}$
12. $(a^u)' = a^u \cdot \ln a \cdot u'$
13. $(\ln u)' = \frac{u'}{u}$
14. $(\log_a u)' = \frac{u'}{u \cdot \ln a}$
15. $(\sin u)' = \cos u \cdot u'$
16. $(\cos u)' = -\sin u \cdot u'$
17. $(\operatorname{tg} u)' = \sec^2 u \cdot u'$
18. $(\operatorname{ctg} u)' = -\operatorname{cosec}^2 u \cdot u'$
19. $(\arcsin u)' = \frac{u'}{\sqrt{1 - u^2}}$
20. $(\arccos u)' = -\frac{u'}{\sqrt{1 - u^2}}$
21. $(\operatorname{arctg} u)' = \frac{u'}{1 + u^2}$
22. $(\operatorname{arcctg} u)' = -\frac{u'}{1 + u^2}$
23. $(\operatorname{arctg} u)' = \frac{u'}{1 + u^2}$