Regras de Derivação

K constante, $n \in \mathbb{R} \backslash \{-1\},$ u e v funções diferenciaveis

1.
$$K' = 0$$

$$2. (Ku)' = Ku'$$

3.
$$(x^n)' = nx^{n-1}$$

4.
$$(u^n)' = nu^{n-1}u'$$

5.
$$(u+v)' = u' + v'$$

6.
$$(u.v)' = u'v + uv'$$

7.
$$(\frac{u}{v})' = \frac{u'v - uv'}{v^2}$$

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

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

$$10. (\tan u)' = u' \sec^2 u$$

11.
$$(\cot u)' = -u' \csc^2 u$$

12.
$$(\sec u)' = u' \sec u \tan u$$

13.
$$(\csc u)' = -u'\csc u \cot u$$

14.
$$(\arcsin u)' = \frac{u'}{\sqrt{1-u^2}}$$

15.
$$(\arccos u)' = -\frac{u'}{\sqrt{1-u^2}}$$

16.
$$(\text{arctg } u)' = \frac{u'}{1+u^2}$$

17.
$$(\operatorname{arccotg} u)' = -\frac{u'}{1+u^2}$$

18.
$$(\operatorname{arcsec} u)' = \frac{u'}{|u|\sqrt{u^2-1}}$$

19.
$$(\operatorname{arccosec} u)' = -\frac{u'}{|u|\sqrt{u^2-1}}$$

20.
$$(e^x)' = e^x$$

21.
$$(e^u)' = u'e^u$$

22.
$$(a^u)' = u'a^u \ln a$$

23.
$$(\ln x)' = \frac{1}{x}$$

$$24. \ (\ln u)' = \frac{u'}{u}$$

$$25. (\log_a u)' = \frac{u'}{u \ln a}$$

26.
$$(u^v)' = vu^{v-1}u' + u^vv' \ln u$$

27.
$$(\operatorname{sh} u)' = u'\operatorname{ch} u$$

$$28. (ch u)' = u' sh u$$

29.
$$(tgh)' = u' sech^2 u$$

30.
$$(\operatorname{argsh} u)' = \frac{u'}{\sqrt{u^2+1}}$$

31.
$$(\operatorname{argch} u)' = \frac{u'}{\sqrt{u^2 - 1}}$$

32.
$$(\operatorname{argtgh} u)' = \frac{u'}{1-u^2}$$