LISTA DE DERIVADAS

Sejam u e v funções deriváveis e n constante:

1. $y = u^n \Rightarrow y' = n \cdot (u^{n-1}) \cdot u'$;
2. $y = u \cdot v \Rightarrow y' = u' \cdot v + u \cdot v'$;
3. $y = \dfrac{u}{v} \Rightarrow y' = \dfrac{u' \cdot v - u \cdot v'}{v^2}$;
4. $y = a^u \Rightarrow y' = a^u \cdot \ln(a) \cdot u', \quad (a > 0, a \neq 1)$;
5. $y = \log_a(u) \Rightarrow y' = \dfrac{u'}{u} \cdot \log_a(e)$;
6. $y = u^v \Rightarrow y' = v \cdot (u^{v-1}) \cdot u' + u^v \cdot (\ln(u)) \cdot v'$;
7. $y = \sin(u) \Rightarrow y' = \cos(u) \cdot u'$;
8. $y = \cos(u) \Rightarrow y' = -\sin(u) \cdot u'$;
9. $y = \tan(u) \Rightarrow y' = \sec^2(u) \cdot u'$;
10. $y = \cot(u) \Rightarrow y' = -\csc^2(u) \cdot u'$;
11. $y = \sec(u) \Rightarrow y' = \sec(u) \cdot \tan(u) \cdot u'$;
12. $y = \csc(u) \Rightarrow y' = -\csc(u) \cdot \cot(u) \cdot u'$;
13. $y = \arcsin(u) \Rightarrow y' = \dfrac{u'}{\sqrt{1-u^2}}$;
14. $y = \arccos(u) \Rightarrow y' = \dfrac{-u'}{\sqrt{1-u^2}}$;
15. $y = \arctan(u) \Rightarrow y' = \dfrac{u'}{1+u^2}$;
16. $y = arc\cot(u) \Rightarrow y' = \dfrac{-u'}{1+u^2}$;
17. $y = arc\sec(u) \quad |u| \geq 1 \Rightarrow y' = \dfrac{u'}{|u|\sqrt{u^2-1}} \quad |u| > 1$;
18. $y = arc\csc(u) \quad |u| \geq 1 \Rightarrow y' = \dfrac{-u'}{|u|\sqrt{u^2-1}} \quad |u| > 1$;