k est une constante
f(x) , g(x) et h(x) sont des fonctions dérivables

Règles de dérivation

1. $\frac{d}{dx} k = 0$ (k ∈ **R**)

2. $\frac{d}{dx} x^n = nx^{n-1}$ (n ∈ **R**)

3. $\frac{d}{dx} kg(x) = k \frac{d}{dx} g(x)$ (k ∈ **R**)

4. $\frac{d}{dx} [g(x) + h(x)] = \frac{d}{dx} g(x) + \frac{d}{dx} f(x)$

5. $\frac{d}{dx} [g(x) \cdot h(x)] = g(x) \frac{d}{dx} h(x) + h(x) \frac{d}{dx} g(x)$

6. $\frac{d}{dx} \left[\frac{g(x)}{h(x)} \right] = \frac{h(x) \frac{d}{dx} g(x) - g(x) \frac{d}{dx} h(x)}{[h(x)]^2}$

7. Soit y = g(h(x)), le résultat de la composition de $\begin{cases} y = g(u) \\ u = h(x) \end{cases}$

$\frac{dy}{dx} = \frac{dy}{du} \cdot \frac{du}{dx}$ Règle de dérivation en chaîne

8. $\frac{d}{dx} (g(x))^n = n(g(x))^{n-1} \cdot \frac{d}{dx} g(x)$ (n ∈ **R**)

9. $\frac{dy}{dx} = \frac{1}{\frac{dx}{dy}}$ (si $\frac{dy}{dx}$ existe et $\frac{dy}{dx} \neq 0$)

10. $\frac{d}{dx} e^{g(x)} = e^{g(x)} \cdot \frac{d}{dx} g(x)$

11. $\frac{d}{dx} \ln g(x) = \frac{1}{g(x)} \cdot \frac{d}{dx} g(x)$

12. $\frac{d}{dx} b^{g(x)} = b^{g(x)} \cdot \frac{d}{dx} g(x)$ $(b > 0 \text{ et } b \neq 1)$

13. $\frac{d}{dx} \log_b g(x) = \frac{1}{g(x)} \cdot \ln b \cdot \frac{d}{dx} g(x)$ $(b > 0 \text{ et } b \neq 1)$

14. $\frac{d}{dx} \sin f(x) = \cos f(x) \cdot \frac{d}{dx} f(x)$

15. $\frac{d}{dx} \cos f(x) = - \sin f(x) \cdot \frac{d}{dx} f(x)$

16. $\frac{d}{dx} \tan f(x) = \sec^2 f(x) \cdot \frac{d}{dx} f(x)$

17. $\frac{d}{dx} \cot f(x) = - \csc^2 f(x) \cdot \frac{d}{dx} f(x)$

18. $\frac{d}{dx} \sec f(x) = \sec f(x) \tan f(x) \cdot \frac{d}{dx} f(x)$

19. $\frac{d}{dx} \csc f(x) = - \csc f(x) \cot f(x) \cdot \frac{d}{dx} f(x)$

20. $\frac{d}{dx} \arcsin f(x) = \frac{1}{\sqrt{1 - f(x)^2}} \cdot \frac{d}{dx} f(x)$

21. $\frac{d}{dx} \arccos f(x) = \frac{-1}{\sqrt{1 - f(x)^2}} \cdot \frac{d}{dx} f(x)$

22. $\frac{d}{dx} \arctan f(x) = \frac{1}{1 + f(x)^2} \cdot \frac{d}{dx} f(x)$

23. $\frac{d}{dx} \text{arccot } f(x) = \frac{-1}{1 + f(x)^2} \cdot \frac{d}{dx} f(x)$

24. $\frac{d}{dx} \text{arcsec } f(x) = \frac{1}{f(x)\sqrt{f(x)^2 - 1}} \cdot \frac{d}{dx} f(x)$

25. $\frac{d}{dx} \text{arccsc } f(x) = \frac{-1}{f(x)\sqrt{f(x)^2 - 1}} \cdot \frac{d}{dx} f(x)$