ANEXO

FORMULAS DE DERIVACIÓN

1. $\dfrac{dC}{dx} = 0$

2. $\dfrac{dx}{dx} = 1$

3. $\dfrac{d}{dx}(u + v - w) = \dfrac{du}{dx} + \dfrac{dv}{dx} - \dfrac{dw}{dx}$

4. $\dfrac{d}{dx}(cu) = c\dfrac{du}{dx}$

5. $\dfrac{d}{dx}(uv) = u\dfrac{dv}{dx} + v\dfrac{du}{dx}$

6. $\dfrac{d}{dx}(u^n) = nu^{n-1}\dfrac{du}{dx}$

7. $\dfrac{d}{dx}(x^n) = nx^{n-1}$

8. $\dfrac{d}{dx}\left(\dfrac{u}{v}\right) = \dfrac{v\dfrac{du}{dx} - u\dfrac{dv}{dx}}{v^2}$

9. $\dfrac{d}{dx}\left(\dfrac{u}{c}\right) = \dfrac{\dfrac{du}{dx}}{c}$

10. $\dfrac{dy}{dx} = \dfrac{dy}{du} \cdot \dfrac{du}{dx}, \quad siendo\ y\ función\ de\ u$

11. $\dfrac{d}{dx}(lnu) = \dfrac{\dfrac{du}{dx}}{u} = \dfrac{1}{u}\dfrac{du}{dx}$

12. $\dfrac{d}{dx}(logu) = \dfrac{loge}{u}\dfrac{du}{dx}$

13. $\dfrac{d}{dx}(a^u) = a^u lna\dfrac{du}{dx}$

14. $\dfrac{d}{dx}(e^u) = e^u\dfrac{du}{dx}$

15. $\dfrac{d}{dx}(u^v) = vu^{v-1}\dfrac{du}{dx} + lu \cdot u^v\dfrac{dv}{dx}$

16. $\dfrac{d}{dx}\sin u = \cos u\dfrac{du}{dx}$

17. $\dfrac{d}{dx}\cos u = -\sin u\dfrac{du}{dx}$

18. $\dfrac{d}{dx}\tan u = \sec^2 u\dfrac{du}{dx}$

19. $\dfrac{d}{dx}\cot u = -\csc^2 u\dfrac{du}{dx}$

20. $\dfrac{d}{dx}\sec u = \sec u \tan u\dfrac{du}{dx}$

21. $\dfrac{d}{dx}\csc u = \csc u \ctg u\dfrac{du}{dx}$

22. $\dfrac{d}{dx}arc\sin u = \dfrac{\dfrac{du}{dx}}{\sqrt{1 - u^2}}$

23. $\dfrac{d}{dx}arc\cos u = -\dfrac{\dfrac{du}{dx}}{\sqrt{1 - u^2}}$

24. $\dfrac{d}{dx}arc\tan u = \dfrac{\dfrac{du}{dx}}{1 + u^2}$

25. $\dfrac{d}{dx}arc\cot u = -\dfrac{\dfrac{du}{dx}}{1 + u^2}$

26. $\dfrac{d}{dx}arc\sec u = \dfrac{\dfrac{du}{dx}}{u\sqrt{u^2 - 1}}$

27. $\dfrac{d}{dx}arc\csc u = -\dfrac{\dfrac{du}{dx}}{u\sqrt{u^2 - 1}}$