

Derivatives and Integrals

Derivatives

Integrals

1. $\frac{d}{dx}[C]$ _____

2. $\frac{d}{dx}[x]$ _____

3. $\frac{d}{dx}\left[\frac{1}{x}\right]$ _____

4. $\frac{d}{dx}[e^x]$ _____

5. $\frac{d}{dx}[a^x]$ _____

6. $\frac{d}{dx}[\ln x]$ _____

7. $\frac{d}{dx}[\log_a x]$ _____

8. $\frac{d}{dx}[\sin x]$ _____

9. $\frac{d}{dx}[\cos x]$ _____

10. $\frac{d}{dx}[\tan x]$ _____

11. $\frac{d}{dx}[\csc x]$ _____

12. $\frac{d}{dx}[\sec x]$ _____

13. $\frac{d}{dx}[\cot x]$ _____

14. $\frac{d}{dx}[\arcsin x]$ _____

15. $\frac{d}{dx}[\arccos x]$ _____

16. $\frac{d}{dx}[\arctan x]$ _____

17. $\frac{d}{dx}[\operatorname{arccot} x]$ _____

18. $\frac{d}{dx}[\operatorname{arcsec} x]$ _____

19. $\frac{d}{dx}[\operatorname{arccsc} x]$ _____

1. $\int dx$ _____

2. $\int x dx$ _____

3. $\int \frac{1}{x} dx$ _____

4. $\int e^x dx$ _____

5. $\int a^x dx$ _____

6. $\int \cos x dx$ _____

7. $\int \sin x dx$ _____

8. $\int (\sec^2 x) dx$ _____

9. $\int (\csc x \cot x) dx$ _____

10. $\int (\sec x \tan x) dx$ _____

11. $\int (\csc^2 x) dx$ _____

12. $\int \tan x dx$ _____

13. $\int \cot x dx$ _____

14. $\int \sec x dx$ _____

15. $\int \csc x dx$ _____

16. $\int \frac{1}{\sqrt{a^2 - x^2}} dx$ _____

17. $\int \frac{1}{a^2 + x^2} dx$ _____

18. $\int \frac{1}{x\sqrt{x^2 - a^2}} dx$ _____