

Anti-Derivative Practice

Anti-derivative Solutions

1. $x^6 + C$
2. $x^3 + 2x^2 - 2x + C$
3. $x^4 + \frac{7}{3}x^3 - 3x^2 + x + C$
4. $\frac{3}{5}x^{\frac{5}{3}} + \frac{9}{4}x^{\frac{4}{3}} + \frac{4}{3}x^3 + C$
5. $\sin x + x + C$
6. $\tan x + C$
7. $-\cos x - \frac{1}{2}x^2 + C$
8. $\frac{3}{5}t^5 + \frac{3}{2}t^2 + C$
9. $\frac{2}{5}x^{\frac{5}{2}}$
10. $9x^3 + 9x^2 + 3x + C$ or $\frac{1}{3}(3x + 1)^3 + C$
11. $\frac{3}{8}t^8 + \frac{24}{5}t^5 + 24t^2 + C$
12. $x^3 - x^2 + x + C$
13. $6x^{\frac{1}{2}} + \frac{1}{3}x^3 - \frac{1}{4}x^4 + C$
14. $\frac{1}{2}x^6 + x^5 + \frac{1}{2}x^4 + C$
15. $x + 2x^{\frac{1}{2}} + C$
16. $\frac{1}{2}x^2 - x^{-1} + C$
17. $\sec x + C$
18. $\tan x - x + C$ [$\tan^2 x = \sec^2 x - 1$]
19. $3 \sec x - 4 \sin x + C$
20. $\frac{1}{2} \sin(x^2) + C$