

Anti-Derivative Practice

Find the anti-derivatives of the functions

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