

Antiderivatives

Determine the antiderivatives for the following functions.

1. $f(x) = \pi$

2. $f(x) = \pi x$

3. $f(x) = x + 6$

4. $f(x) = x^2 - x + 2$

5. $f(x) = 1 - 2x + x^4$

6. $f(x) = x\sqrt{x} - 2$

7. $f(x) = 3x^2 - 6x + 7$

8. $f(x) = \sqrt[3]{x} - \sqrt{x} + 4$

9. $f(x) = \frac{4}{x^2} - 2$

10. $f(x) = \frac{1}{\sqrt{x}} + 4\sqrt{x}$

11. $f(x) = 2x^{1/4} + 5x^{3/4} + 1$

12. $f(x) = 9x^{-2/3} - 4x^8$

13. $f(x) = \sin(x) - \cos(x)$

14. $f(x) = 2\sqrt{x} - \sec(x) \tan(x)$

15. $f(x) = x^4 - \sec^2(x) - \pi$

16. $f(x) = 6 + \cos(x) - x^3$

17. $f(x) = 2x - \sin(x) + 6$

18. $f(x) = 2\pi + 6\csc(x) \cot(x) + 5$

19. $f(x) = \frac{1}{x^3} + \frac{2}{x^4} - \frac{3}{x^5}$

20. $f(x) = \frac{1}{\sqrt[3]{x^2}} + \frac{2}{\sqrt[4]{x^5}}$