

Chapter 4 Integration and Fundamental Theorem of Calculus

<i>Integral</i>	
1.	$\int f'(x) dx$
2.	$\int_3^7 g'(x) dx$
3.	$\int [h'(x) + 13] dx$
4.	$\int \sin x dx$
5.	$\int_0^{\frac{\pi}{4}} \sec^2(x) dx$
6.	$\int_{-2}^{10} [3x^2 + 2x + 1] dx$
7.	$\int_{10}^{-2} [3x^2 + 2x + 1] dx$
8.	$\int_0^{2\pi} \cos \theta d\theta$
9.	$\int (\sin^2 \theta + \cos^2 \theta) d\theta$
10.	$\int \sqrt{x} (\sqrt{x} + 1) dx$
11.	$\int \frac{x^2 - 2x}{x} dx$
12.	$\int_2^4 \frac{1}{x^2} dx$
13.	$\int_1^5 f''(x) dx$

14. $\int \sqrt{4x^5 - 5x} (20x^4 - 5) dx$

15. $\int x(x+3)^9 dx$

16. $\int_0^1 3x^2(x^3+1)^4 dx$

17. $\frac{d}{dx} \int_1^x f(t) dt$

18. $\int_{\frac{\pi}{2}}^x \cos t dt$

19. $\frac{d}{dx} \int_{\frac{\pi}{2}}^x \cos t dt$

20. Let $g(x) = \int_3^x f(t) dt$. Find $g(3)$

21. $f(3) + \int_3^7 f'(x) dx = ?$