

CH 6 HW DAY 99 § 6.2
p. 330 #1-16, 28

$$\textcircled{1} \int f(x) dx = \int 5 dx = \boxed{5x + C}$$

$$\textcircled{2} \int 5t dt = \boxed{\frac{5}{2}t^2 + C}$$

$$\textcircled{3} \int \sqrt{z} dz = \int z^{\frac{1}{2}} dz = \boxed{\frac{2}{3}z^{\frac{3}{2}} + C}$$

$$\textcircled{4} \int t^2 + t dt = \boxed{\frac{1}{3}t^3 + \frac{1}{2}t^2 + C}$$

$$\textcircled{5} \int x^2 dx = \boxed{\frac{1}{3}x^3 + C}$$

$$\textcircled{6} \int \frac{1}{x} dx = \boxed{\ln|x| + C}$$

$$\textcircled{7} \int \frac{1}{x^2} dx = \boxed{\frac{-1}{x} + C}$$

$$\textcircled{8} \int \cos x dx = \boxed{-\sin x + C}$$

$$\textcircled{9} \int \frac{1}{z^3} dz = \frac{z^{-2}}{-2} + C = \boxed{\frac{-1}{2z^2} + C}$$

$$\textcircled{10} \int x^4 + \frac{1}{x} dx = \boxed{\frac{1}{5}x^5 + \ln|x| + C}$$

$$\textcircled{11} \int e^x dx = \boxed{e^x + C}$$

$$\textcircled{12} \int \sin x dx = \boxed{-\cos x + C}$$

$$\textcircled{13} \int 2x^2 + 3x^3 + 4x^4 dx = \boxed{\frac{2}{3}x^3 + \frac{3}{4}x^4 + \frac{4}{5}x^5 + C}$$

$$\textcircled{14} \int x^3 + \frac{x^2}{2} - x dx = \boxed{\frac{1}{4}x^4 + \frac{x^3}{6} - \frac{x^2}{2} + C}$$

$$\textcircled{15} \int \frac{t^2+1}{t} dt = \int t + \frac{1}{t} dt = \boxed{\frac{t^2}{2} + \ln|t| + C}$$

$$\textcircled{16} \int 5x - \sqrt{x} dx = \boxed{\frac{5}{2}x^2 - \frac{2}{3}x^{\frac{3}{2}} + C}$$

$$\textcircled{28} h(t) = \frac{7}{\cos^2 t} = 7\sec^2 t \quad \int 7\sec^2 t dt = \boxed{7 \tan t + C}$$