

12.4 | 연습문제 정답

01. (a) 1 (b) 55
(c) 57 (d) 156

02. (a) $\frac{1}{3}$ (b) $\frac{8}{3} \ln 8$

03. $\int_0^2 \int_0^4 \int_0^{\frac{1}{2}y} f(x, y, z) dx dy dz, \int_0^4 \int_0^2 \int_0^{\frac{y}{2}} f(x, y, z) dx dz dy$

04. $\int_0^3 \int_{\frac{2}{3}x}^{-\frac{1}{3}x+3} \int_0^{2-\frac{2}{9}x-\frac{2}{3}y} f(x, y, z) dz dx dy$

05. $\int_0^2 \int_0^{6-3z} \int_0^{-\frac{1}{2}x+3-\frac{3}{2}z} f(x, y, z) dy dx dz$
 $\int_0^2 \int_0^{3-\frac{3}{2}z} \int_0^{-2y+6-3z} f(x, y, z) dx dy dz$

06. $\int_0^3 \int_0^{3-x} \int_0^{3-y-x} f(x, y, z) dz dy dx$

07. $\frac{2}{3}$

08. $\frac{2}{3}$

09. $\frac{1}{3}$

10. $\frac{972}{5}$

11. $\frac{3\pi}{4}$

12. $2\sin 4$

13. $\ln 129$

14. $\frac{4}{3} \left[1 - \cos \left(\frac{1}{2} \right) \right]$

15. $\frac{4}{3}$