

Soluciones Listado 2
Cálculo III (2025)
PLEV 2018

1. 270
2. 0
3. 4
4. $-68/3$
5. a) $\frac{4(\pi + 2)}{\pi^3}$,
b) $e^{16} - 1$.
- 6.
7. $4/3$
8. $8/15$
9. $e^2 - 3$
10. $\ln 4$
11. $\frac{2}{3} (5\sqrt{5} - 1)$
12. $\frac{\ln(2)}{2} - \frac{5}{16}$
13. $81/4$
14. $4/3$
15. $\int_0^4 \int_0^{4-x} \int_0^{\frac{\sqrt{16-y^2}}{2}} 1 \, dz \, dy \, dx,$
 $\int_0^2 \int_0^{4-\sqrt{16-4z^2}} \int_0^{\sqrt{16-4z^2}} 1 \, dy \, dx \, dz + \int_0^2 \int_{4-\sqrt{16-4z^2}}^4 \int_0^{4-x} 1 \, dy \, dx \, dz$
16. $64/3$
17. $\frac{\ln(128)}{3}$
18. 128
19. $3(e - e^{-1})$

20. $e^{16} - 1$
21. $\frac{\pi}{6} (e^{36} - 1)$
22. $1/60$
23. $\frac{3920\pi}{3}$
24. $\frac{4\pi}{3}$
25. $2\pi \ln\left(\frac{b}{a}\right)$
26. $\frac{4\pi}{3}abc$
27. $\frac{80\pi}{3}$
28. 8π
29. $\frac{4\pi}{3}abc$
30. $\frac{2\pi R^3}{3}(1 - \cos \alpha)$
31. $\frac{8\pi}{3}$
32. $\frac{8\pi}{3}$
33. $\frac{7\pi a^4}{6}$
34. $4\pi \ln\left(\frac{b}{a}\right)$
35. $\frac{16\pi}{9}$
36. $\frac{\pi H^2(3R - H)}{3}$
37. $\sin(84) - \sin(15)$
38. $32/9$
39. $\frac{1000\pi}{3} (2 - \sqrt{2})$
40. $\frac{(abc)^2}{48}$

EGG/egg