17.3

1. $\iint FdS = \iiint 0dV = 0$
3. $\int_0^2 \int_0^{2\pi} \int_0^1 2r dr\, d\theta\, dz = 4\pi$
5. $\int_0^{\pi} \int_0^{2\pi} \int_0^1 \rho^4 (\cos(\varphi))^2 \sin(\varphi)\, d\rho\, d\theta\, d\varphi = \frac{4\pi}{15}$
7. $\int_0^3 \int_0^{2\pi} \int_0^2 r(r^2 + z^2) dr\, d\theta\, dz = 60\pi$
11. $\int_0^{\frac{\pi}{2}} \int_0^{\frac{\pi}{2}} \int_0^2 3(\rho^2 (\sin(\varphi))^2 (\cos(\theta))^2 + \rho^2 (\cos(\varphi))^2) \rho^2 \sin(\varphi)\, d\rho\, d\theta\, d\varphi = \frac{32\pi}{5}$
13. $\int_0^{2\pi} \int_0^2 \int_x^8 r(2 + r * \sin(\theta)) dz\, dr\, d\theta = 64\pi$
15. $\int_0^{2\pi} \int_0^3 \int_0^{9-r^2} 2r dz\, dr\, d\theta = 81\pi$