(15) $\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} \int_0^2 \int_0^{r^2} r \, dz\, dr\, d\theta$

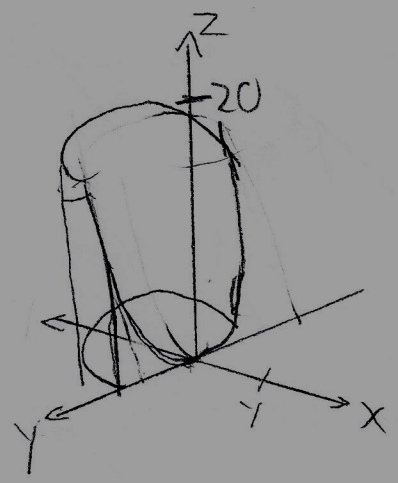
$z \in [0, r^2] = [0, x^2+y^2]$

$r \in [0,2]$

$\theta \in [-\frac{\pi}{2}, \frac{\pi}{2}]$

$= \int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} d\theta \int_0^2 r^3 \, dr$

$\pi \left[\frac{1}{4} 2^4\right] = 4\pi$



(17) $\iiint_E \sqrt{x^2+y^2} \, dV$ $\quad x^2+y^2 = r^2 \quad \sqrt{r^2} = r$

$x^2+y^2 = 16$ $\quad z \in [-5, 4]$ $\quad \theta \in [0, 2\pi]$

$r^2 = 16$

$r = 4$

$\int_0^{2\pi} \int_0^4 \int_{-5}^4 r^2 \, dz\, dr\, d\theta = \int_0^{2\pi} d\theta \int_0^4 r^2 dr \cdot \int_{-5}^4 dz = 18\pi\left(\frac{1}{3}4^3\right)$

$= 6\pi(64) = \boxed{384\pi}$