> $restart : with(LinearAlgebra) :$

> $integral := int(int(int(\text{rho}, \text{rho} = 0 .. \text{sqrt}(a^2 - z^2))), z = c .. b), \text{theta} = 0 .. 2 \cdot \text{Pi})$

$$integral := a^2 (b - c) \pi - \frac{b^3 \pi}{3} + \frac{c^3 \pi}{3} \tag{1}$$

> $simplify(integral)$

$$\pi \left(a^2 (b - c) - \frac{b^3}{3} + \frac{c^3}{3} \right) \tag{2}$$

>