

$$\text{Pi} \cdot \int_0^4 \left(\left(1 - \frac{y^4}{64} \right)^2 - \left(1 - \frac{y}{4} \right)^2 \right) dy$$

$$\frac{152 \pi}{45} \tag{1}$$

$$64^2$$

$$4096 \tag{2}$$

$$32 \cdot 9 \cdot 64$$

$$18432 \tag{3}$$

$$36 \cdot 64 \cdot 5$$

$$11520 \tag{4}$$

$$60 \cdot 64$$

$$3840 \tag{5}$$

$$\text{Pi} \cdot \int_0^2 \left(\left(1 - \frac{y^4}{16} \right)^2 - \left(1 - \frac{y}{2} \right)^2 \right) dy$$

$$\frac{34 \pi}{45} \tag{6}$$