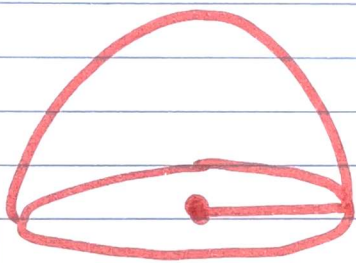


Lesson 5.2-4 → Multi-Step Problems

Multiply full shape volume by fractions to get partial volumes.
and/or

Add or subtract volumes as needed



15 in.

What is the volume, in terms of pi, in cubic inches, of the hemisphere shown?

$$\text{full sphere} = \frac{4}{3}\pi r^3$$

$$\frac{1}{2} \text{ sphere} = \frac{1}{2} \left(\frac{4}{3}\pi r^3 \right)$$

$$V = \pi \cdot 1 \div 2 \times 4 \div 3 \times 15 \times 15 \times 15$$

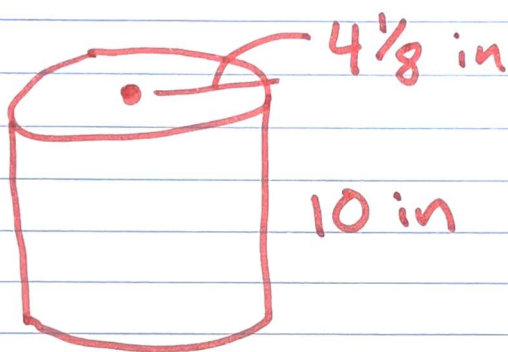
$$V = 2,250\pi$$

Also, remember you can turn a mixed number into a decimal by treating the fraction part as a division problem

$$4\frac{1}{8} = 4 + \frac{1}{8} = 4 + (1 \div 8)$$

↘

$$4 + 0.125 = 4.125$$



What is the volume in cubic inches using 3.14 for π ?

$$V = \pi r^2 h$$

$$V = 3.14 \times 4.125 \times 4.125 \times 10$$

$$V = 534.290625$$

$$V \approx 534.29$$