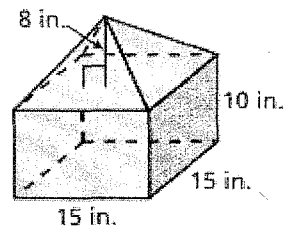


NAME: _____
SURFACE AREA & VOLUME

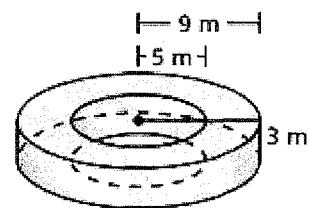
DATE: _____
PERIOD: _____

How Do You Find the Volume of a Composite Solid?

EXAMPLE 1: Finding the Volume of a Composite Solid

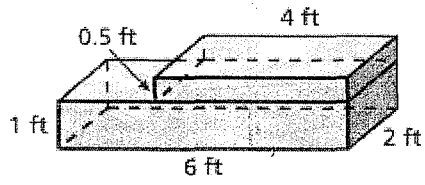


EXAMPLE 2: Finding the Volume of a Composite Solid

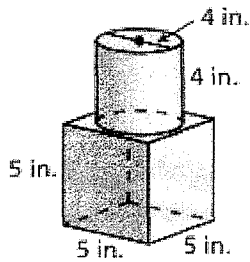


PRACTICE: Find the volume of the composite solid. Round your answer to the nearest tenth.

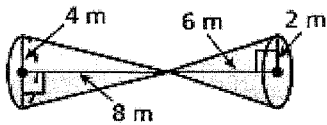
1.



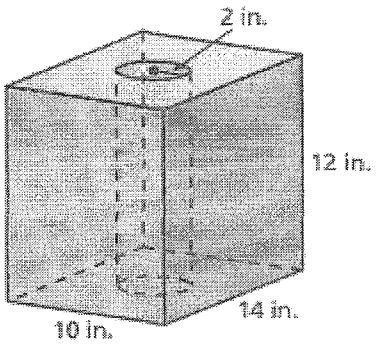
2.



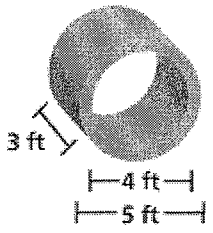
3.



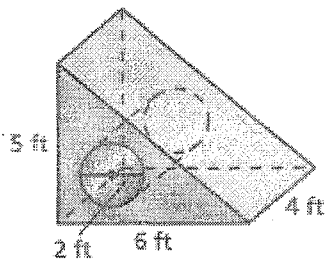
4.



5.

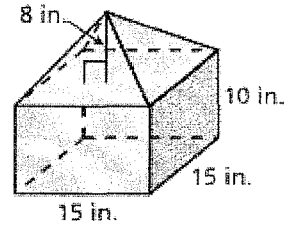


6.



How Do You Find the Volume of a Composite Solid?

EXAMPLE 1: Finding the Volume of a Composite Solid



Rect. Pyramid

$$V = \frac{1}{3} B h$$

$$V = \frac{1}{3} (15)(15)(8)$$

$$V = 600$$

Rect. Prism

$$V = B h$$

$$V = (15)(15)(10)$$

$$V = 2250$$

$$\text{TOTAL} = 600 + 2250$$

$$= 2850 \text{ in}^3$$

EXAMPLE 2: Finding the Volume of a Composite Solid

Large Cylinder

$$V = B h$$

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

$$V = \pi (9^2)(3)$$

$$V = 763.4$$

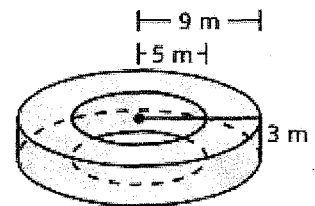
Small Cylinder

$$V = B h$$

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

$$V = \pi (5^2)(3)$$

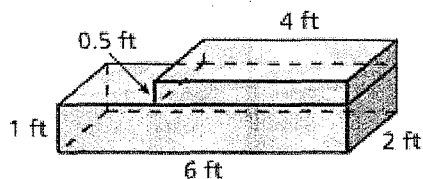
$$V = 235.6$$



$$\begin{aligned} \text{TOTAL VOLUME} &= 763.4 - 235.6 \\ &= 527.8 \text{ m}^3 \end{aligned}$$

PRACTICE: Find the volume of the composite solid. Round your answer to the nearest tenth.

1.



Large Rect. Prism

$$V = Bh$$

$$V = (Lw)h$$

$$V = 6(2)(1)$$

$$V = 12$$

Small. Rect. Prism

$$V = Bh$$

$$V = (Lw)h$$

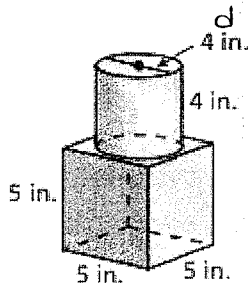
$$V = 4(2)(0.5)$$

$$V = 4$$

$$\text{TOTAL VOLUME} = 12 + 4$$

$$= 16 \text{ ft}^3$$

2.



Cylinder

$$V = Bh$$

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

$$V = \pi (2)^2 (4)$$

$$V = 50.3$$

Cube

$$V = Bh$$

$$V = (s^2)h$$

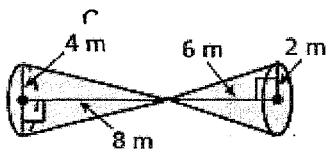
$$V = 5^2 \cdot 5$$

$$V = 125$$

$$\text{TOTAL VOLUME} = 50.3 + 125$$

$$= 175.3 \text{ in}^3$$

3.



Large Cone

$$V = \frac{1}{3} Bh$$

$$V = \frac{1}{3} (\pi r^2) h$$

$$V = \frac{1}{3} \pi (4)^2 (8)$$

$$V = 134.0$$

Small Cone

$$V = \frac{1}{3} Bh$$

$$V = \frac{1}{3} \pi r^2 h$$

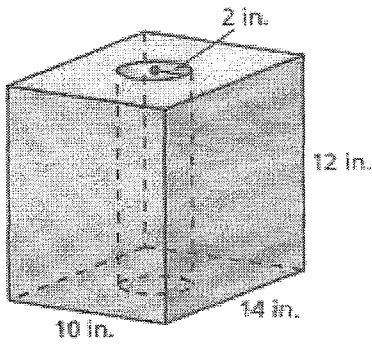
$$V = \frac{1}{3} \pi (2)^2 (6)$$

$$V = 25.1$$

$$\text{Total Volume} = 134 + 25.1$$

$$= 159.1 \text{ m}^3$$

4.

Rect. Prism

$$V = Bh$$

$$V = (Lw)h$$

$$V = 10(14)(12)$$

$$V = 1680$$

Cylinder

$$V = Bh$$

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

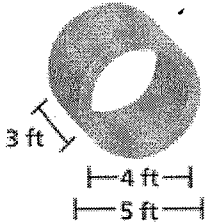
$$V = \pi (2)^2 (12)$$

$$V = 150.8$$

$$\text{TOTAL} = 1680 - 150.8$$

$$= 1529.2 \text{ in}^3$$

5.

Large

$$V = Bh$$

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

$$V = \pi (2.5)^2 (3)$$

$$V = 58.9$$

Small

$$V = Bh$$

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

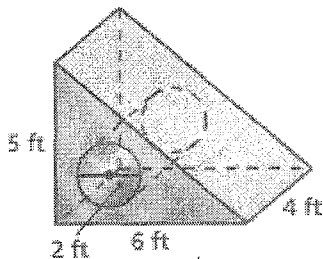
$$V = \pi (2)^2 (3)$$

$$V = 37.7$$

$$\text{TOTAL} = 58.9 - 37.7$$

$$= 21.2 \text{ ft}^3$$

6.

Triangular Prism

$$V = Bh$$

$$V = (\frac{1}{2}bh)h$$

$$V = \frac{1}{2}(6)(5)(4)$$

$$V = 60$$

Cylinder

$$V = Bh$$

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

$$V = \pi (2)^2 (4)$$

$$V = 50.3$$

$$\text{TOTAL} = 60 - 50.3$$

$$= 9.7 \text{ ft}^3$$