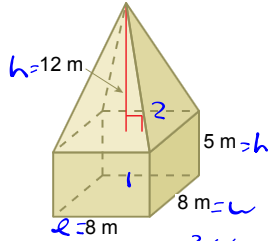


Lesson 9.5b Volume of Composite Solids

9.5b Volume of Composite Figures

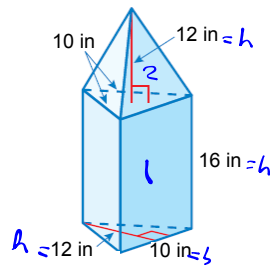
Ex. 1 Find volume



$$\begin{array}{r}
 256 \\
 3 \overline{) 768} \\
 \underline{300} \\
 468 \\
 \underline{450} \\
 188 \\
 \underline{180} \\
 88 \\
 \underline{87} \\
 1
 \end{array}$$

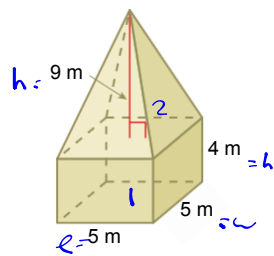
$$\begin{aligned}
 V &= 1 + 2 \\
 V &= Bh + \frac{1}{3} Bh \\
 V &= R \cdot w \cdot h + \frac{1}{3} R \cdot w \cdot h \\
 V &= 8m(8m)(5m) + \frac{1}{3}(8m)(8m)(12m) \\
 V &= 320m^3 + \frac{1}{3} 768m^3 \\
 V &= 320m^3 + 256m^3 \\
 \boxed{V &= 576m^3}
 \end{aligned}$$

Ex. 2 Find volume



$$\begin{aligned}
 V &= 1 + 2 \\
 V &= Bh + \frac{1}{3} Bh \\
 V &= \frac{b \cdot h}{2} \cdot h + \frac{1}{3} \frac{b \cdot h}{2} \cdot h \\
 V &= \frac{10in(10in)}{2}(16in) + \frac{1}{3} \frac{10in(10in)}{2}(12in) \\
 V &= 60in^2(16in) + \frac{1}{3}(60in^2)(12in) \\
 V &= 960in^3 + \frac{1}{3} 720in^3 \\
 V &= 960in^3 + 240in^3 \\
 \boxed{V &= 1200in^3}
 \end{aligned}$$

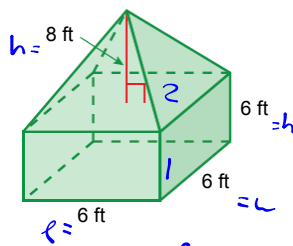
Ex. 3 Find volume



$$\begin{array}{r}
 3 \overline{) 175} \\
 \underline{90} \\
 85 \\
 \underline{84} \\
 1
 \end{array}$$

$$\begin{aligned}
 V &= Bh + \frac{1}{3} Bh \\
 V &= R \cdot w \cdot h + \frac{1}{3} R \cdot w \cdot h \\
 V &= 5m(5m)(4m) + \frac{1}{3}(5m)(5m)(9m) \\
 V &= 100m^3 + \frac{1}{3} 225m^3 \\
 V &= 100m^3 + 75m^3 \\
 \boxed{V &= 175m^3}
 \end{aligned}$$

Ex. 4 Find volume



$$\begin{array}{r}
 96 \\
 3 \overline{) 312} \\
 \underline{270} \\
 428 \\
 \underline{420} \\
 88 \\
 \underline{87} \\
 1
 \end{array}$$

$$\begin{aligned}
 V &= 1 + 2 \\
 V &= Bh + \frac{1}{3} Bh \\
 V &= R \cdot w \cdot h + \frac{1}{3} R \cdot w \cdot h \\
 V &= 6ft(6ft)(6ft) + \frac{1}{3}(6ft)(6ft)(8ft) \\
 V &= 216ft^3 + \frac{1}{3} 288ft^3 \\
 V &= 216ft^3 + 96ft^3 \\
 \boxed{V &= 312ft^3}
 \end{aligned}$$