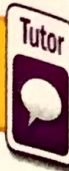


Volume of a Composite Figure

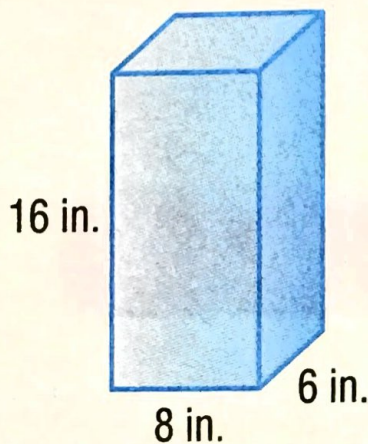
The volume of a composite figure can be found by separating the figure into solids whose volumes you know how to find.

Examples



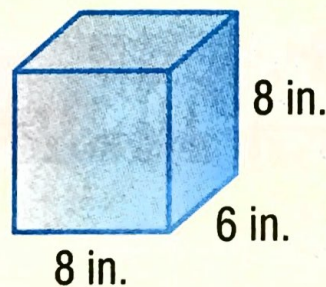
1. Find the volume of the composite figure.

Find the volume of each prism.



$$V = \ell wh$$

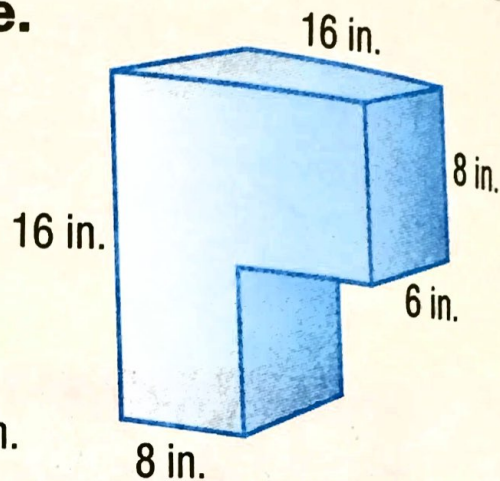
$$V = 8 \cdot 6 \cdot 16 \text{ or } 768$$



$$V = \ell wh$$

$$V = 8 \cdot 6 \cdot 8 \text{ or } 384$$

The volume is $768 + 384$ or 1,152 cubic inches.



Surface Area of a Composite Figure

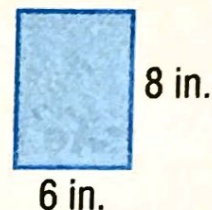
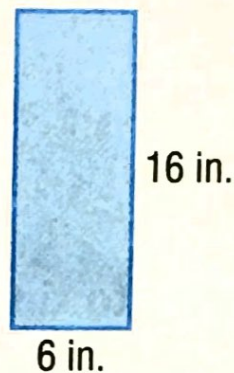
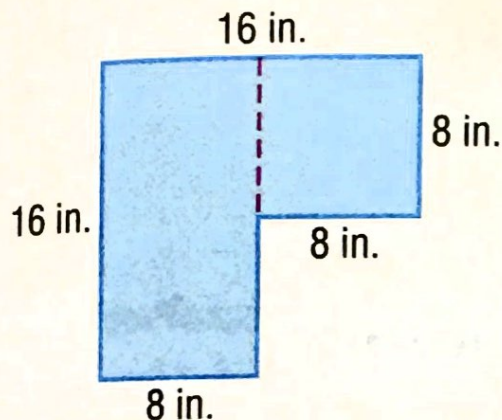
You can also find the surface area of composite figures by finding the areas of the faces that make up the composite figure.

Examples



3. Find the surface area of the figure in Example 1.

The surface is made up of three different polygons.



$$A = \ell w + \ell w$$

$$A = (8 \cdot 16) + (8 \cdot 8)$$

$$A = 128 + 64 \text{ or } 192$$

$$A = \ell w$$

$$A = 6 \cdot 16$$

$$A = 96$$

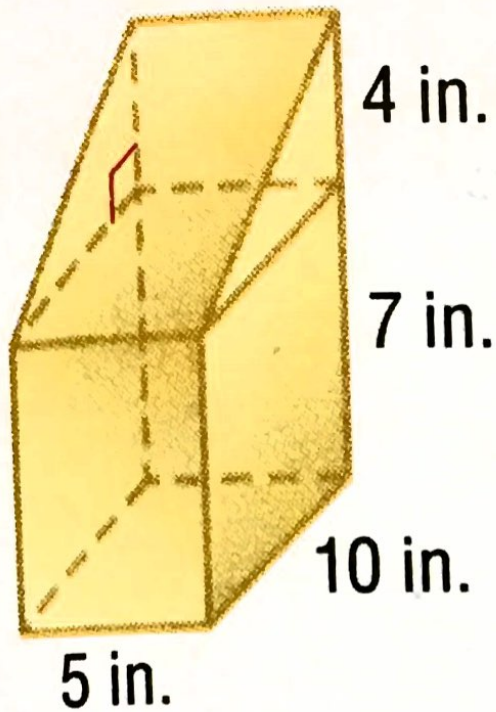
$$A = \ell w$$

$$A = 6 \cdot 8$$

$$A = 48$$

The total surface area is $2(192) + 2(96) + 4(48)$ or 768 square inches.

14.



$$\underline{450 \text{ in}^3}$$

Homework Help

Rectangular Prism

$$V = lwh$$

$$V = 5 \cdot 10 \cdot 7$$

$$V = 350$$

Triangular Prism

$$V = Bh$$

$$V = \frac{1}{2} \cdot 10 \cdot 4 \cdot 5$$

$$V = 100$$

$$\text{Total Volume} = 350 + 100 \text{ or } 450 \text{ in}^3$$