

Volume of Composite Shapes - Practice Worksheet

Name: _____ Date: _____

Instructions: Find the volume of each composite shape. Split the figure into simpler solids, calculate each volume, then add or subtract as needed. Round answers to 2 decimal places where necessary. Use $\pi = 3.14$.

1. A rectangular prism ($l=6$ cm, $w=4$ cm, $h=3$ cm) sits on top of a larger rectangular prism ($l=10$ cm, $w=8$ cm, $h=5$ cm). Find the total volume.

2. A cylinder ($r=3$ cm, $h=7$ cm) sits on top of a rectangular prism ($l=10$ cm, $w=10$ cm, $h=4$ cm). Find the total volume. Use $\pi=3.14$.

3. An L-shaped prism has a cross-section made of two rectangles: one 8 cm x 5 cm and one 4 cm x 3 cm. The prism is 10 cm deep. Find the volume.

4. A cone ($r=4$ cm, $h=9$ cm) sits on top of a cylinder ($r=4$ cm, $h=6$ cm). Find the total volume. Use $\pi=3.14$.

5. A rectangular prism ($l=12$ cm, $w=5$ cm, $h=8$ cm) has a cylindrical hole drilled through it ($r=2$ cm, $h=8$ cm). Find the remaining volume. Use $\pi=3.14$.

6. Two identical cubes (side=5 cm) are stacked on top of each other. Find the total volume.

7. A triangular prism (base=6 cm, height of triangle=4 cm, length=10 cm) is placed next to a rectangular prism ($l=10$ cm, $w=3$ cm, $h=4$ cm). Find the combined volume.

8. A half-cylinder ($r=5$ cm, $h=12$ cm) is placed flat-side down on a rectangular prism ($l=12$ cm, $w=10$ cm, $h=4$ cm). Find the total volume. Use $\pi=3.14$.

9. A square pyramid (base side=6 cm, height=9 cm) sits on top of a cube (side=6 cm). Find the total volume.

10. A composite solid consists of a large cylinder ($r=6$ cm, $h=10$ cm) with a smaller cylinder ($r=2$ cm, $h=10$ cm) removed from its center. Find the remaining volume. Use $\pi=3.14$.

Answer Key

1. 472 cm^3

2. 591.06 cm^3

3. 520 cm^3

4. 452.16 cm³
5. 379.44 cm³
6. 250 cm³
7. 240 cm³
8. 1422 cm³
9. 324 cm³
10. 880.16 cm³