

Volume of Composite Figures - Practice Worksheet

Name: _____ Date: _____

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

1. A rectangular prism (length=8 cm, width=4 cm, height=3 cm) sits on top of another rectangular prism (length=8 cm, width=4 cm, height=5 cm). Find the total volume.

2. A solid is made of two cubes joined together. Cube A has side 3 cm and Cube B has side 5 cm. Find the total volume.

3. A rectangular prism ($l=10$ m, $w=6$ m, $h=4$ m) has a smaller rectangular prism ($l=3$ m, $w=2$ m, $h=4$ m) cut out from one end. Find the remaining volume.

4. A cylinder (radius=4 cm, height=10 cm) sits on top of a rectangular prism ($l=12$ cm, $w=12$ cm, $h=5$ cm). Find the total volume. (Use $\pi=3.14$)

5. An L-shaped prism: the full base is 10 cm x 8 cm x 6 cm, but a rectangular section (4 cm x 3 cm x 6 cm) is removed from one corner. Find the volume.

6. A triangular prism (base=6 cm, height of triangle=4 cm, length=10 cm) is placed on top of a rectangular prism ($l=10$ cm, $w=8$ cm, $h=5$ cm). Find the total volume.

7. A solid cylinder (radius=5 cm, height=12 cm) has a cylindrical hole (radius=2 cm, height=12 cm) drilled through its center. Find the volume of the remaining solid. (Use $\pi=3.14$)

8. A rectangular prism ($l=15$ cm, $w=8$ cm, $h=6$ cm) has a cone (radius=3 cm, height=6 cm) removed from its top face. Find the remaining volume. (Use $\pi=3.14$)

9. A composite solid consists of a hemisphere (radius=6 cm) placed on top of a cylinder (radius=6 cm, height=10 cm). Find the total volume. (Use $\pi=3.14$)

10. A stepped solid has three rectangular layers stacked vertically: Bottom layer ($l=12$ cm, $w=10$ cm, $h=4$ cm), Middle layer ($l=8$ cm, $w=6$ cm, $h=4$ cm), Top layer ($l=4$ cm, $w=3$ cm, $h=4$ cm). Find the total volume.

Answer Key

1. 256 cm³
2. 152 cm³

3. 216 m^3
4. 1222.4 cm^3
5. 408 cm^3
6. 520 cm^3
7. 1055.04 cm^3
8. 663.48 cm^3
9. 1583.04 cm^3
10. 720 cm^3