Volume of Rectangular Prisms — Homework

Lesson 5-10 • Standard 6.GR.2

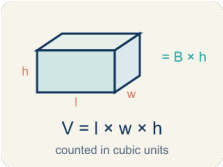
Name: _____ **Period:** _____ **Date:** _____

Today's Goals

Content: I can find the volume of a rectangular prism, including ones with fractional edge lengths, using base area × height.

Language: I can explain my work using the words volume, rectangular prism, dimensions, and base area.

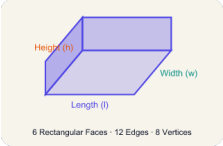
Key Words



Volume of Rectangular Prisms (Volumen de prismas rectangulares) — The space inside a rectangular prism. Formula: V = Bh = l × w × h.



Volume (Volumen) — How much space is inside a solid shape.



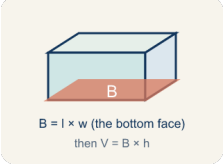
Rectangular prism (Prisma rectangular) — A solid box shape with six flat rectangle sides.



Cubic units (Unidades cúbicas) — The units used to measure space inside, like cubic inches.



Dimensions (Dimensiones) — How long, how wide, and how tall a shape is.



Base area (Área de la base) — The area of the bottom of a solid. Volume = base area × height.

Practice

Show your work. Use the blank space under each problem.

1. What is the volume of a rectangular prism with l = 4 in, w = 3 in, h = 5 in?

A. 12 in³

B. 24 in³

C. 60 in³
D. 60 in²

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2. A box has a volume of 36 cm³. Its length is 6 cm and width is 3 cm. What is the height?

A. 2 cm
B. 3 cm
C. 6 cm
D. 12 cm

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3. Find the missing dimension or volume for each container.

Container	Length	Width	Height	Volume
Box A	12 in	5 in	3 in	
Box B	7 cm		4 cm	168 cm³
Box C		8 ft	5 ft	240 ft³

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4. Two boxes: Box A is 10 × 5 × 4 inches. Box B is 8 × 6 × 5 inches. Which has more volume and by how much?

A. Box B by 40 in³
B. Box A by 40 in³
C. Box B by 60 in³
D. They're equal

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5. Sort each item into the correct group.

- → _____
- → _____
- → _____
- → _____

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6. Spot the Common Mistake

Step 1 (Dimensions): A box is 6 in long, 4 in wide, and 1/2 in tall.
Step 2 (Formula): V = length × width × height
Step 3 (Calculate): V = 6 × 4 × 1/2, and the student dropped the 1/2: V = 6 × 4 = 24 cubic in
Step 4 (Answer): Volume = 24 cubic in
Which step has the mistake? Explain and fix it:

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7. What is the volume of a prism with edge lengths 1/2 m, 3 m, and 4 m?

A. 3 m³
B. 6 m³
C. 7.5 m³
D. 12 m³

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8. A cube has an edge length of 5 cm. What is its volume?

A. 15 cm³
B. 25 cm³
C. 75 cm³
D. 125 cm³

9. A time-capsule box measures 6 in long, 4 in wide, and 3 in tall. What is its volume?

A. 13 cubic in
B. 24 cubic in
C. 72 cubic in
D. 72 square in

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10. Two storage boxes are ready to pack. Box A is 5 × 5 × 2 inches and Box B is 4 × 4 × 3 inches. Which box holds more?

A. Box B, because 48 cubic in is more than 50 cubic in
B. Box A, because 50 cubic in is more than 48 cubic in
C. They hold the same amount
D. Box B, because it is taller
