



# Volume of Rectangular Prisms

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Grade: Grade 5

## Part A: Fill in the Blank

Write the missing word or number on each line.

1. To find the volume of an L-shaped solid, split it into two \_\_\_\_\_ and add their volumes.
2. Prism A is  $4 \times 3 \times 2$  cm and Prism B is  $5 \times 3 \times 2$  cm. The combined volume is \_\_\_\_\_  $\text{cm}^3$ .
3. A block is  $10 \times 6 \times 4$  cm with a  $3 \times 2 \times 4$  cm notch cut out. The remaining volume is \_\_\_\_\_  $\text{cm}^3$ .
4. Two identical prisms each  $2 \times 3 \times 5$  in are stacked. The total volume is \_\_\_\_\_  $\text{in}^3$ .
5. A T-shaped solid has a top piece  $8 \times 2 \times 3$  cm and a base  $4 \times 2 \times 5$  cm. Total volume is \_\_\_\_\_  $\text{cm}^3$ .
6. When a hole is cut from a solid, we \_\_\_\_\_ the hole's volume from the solid's volume.
7. A  $6 \times 6 \times 6$  cm cube has a  $2 \times 2 \times 6$  cm tunnel cut through it. The remaining volume is \_\_\_\_\_  $\text{cm}^3$ .
8. Prism A is  $3 \times 4 \times 5$  m and Prism B is  $3 \times 4 \times 3$  m. Together their volume is \_\_\_\_\_  $\text{m}^3$ .
9. A step shape has a bottom layer  $10 \times 4 \times 2$  cm and a top layer  $6 \times 4 \times 2$  cm. Its volume is \_\_\_\_\_  $\text{cm}^3$ .

## Part B: Matching

Match each item on the left to the correct answer on the right.

1. Match each item to its correct answer.

|  |         |                    |
|--|---------|--------------------|
| Bottom $8 \times 5 \times 3$ + Top $4 \times 5 \times 2$     | → _____ | $84 \text{ cm}^3$  |
| Solid $7 \times 4 \times 6$ – Hole $2 \times 2 \times 6$     | → _____ | $90 \text{ cm}^3$  |
| Two stacked: $3 \times 3 \times 4$ and $3 \times 3 \times 6$ | → _____ | $144 \text{ cm}^3$ |
| Bottom $6 \times 4 \times 2$ + Top $3 \times 4 \times 3$     | → _____ | $160 \text{ cm}^3$ |

## Answer Key · Volume of Rectangular Prisms · Grade: Grade 5

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### Part A: Fill in the Blank

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Write the missing word or number on each line.

1. To find the volume of an L-shaped solid, split it into two **rectangular prisms** and add their volumes.
2. Prism A is  $4 \times 3 \times 2$  cm and Prism B is  $5 \times 3 \times 2$  cm. The combined volume is **54**  $\text{cm}^3$ .
3. A block is  $10 \times 6 \times 4$  cm with a  $3 \times 2 \times 4$  cm notch cut out. The remaining volume is **216**  $\text{cm}^3$ .
4. Two identical prisms each  $2 \times 3 \times 5$  in are stacked. The total volume is **60**  $\text{in}^3$ .
5. A T-shaped solid has a top piece  $8 \times 2 \times 3$  cm and a base  $4 \times 2 \times 5$  cm. Total volume is **88**  $\text{cm}^3$ .
6. When a hole is cut from a solid, we **subtract** the hole's volume from the solid's volume.
7. A  $6 \times 6 \times 6$  cm cube has a  $2 \times 2 \times 6$  cm tunnel cut through it. The remaining volume is **192**  $\text{cm}^3$ .
8. Prism A is  $3 \times 4 \times 5$  m and Prism B is  $3 \times 4 \times 3$  m. Together their volume is **96**  $\text{m}^3$ .
9. A step shape has a bottom layer  $10 \times 4 \times 2$  cm and a top layer  $6 \times 4 \times 2$  cm. Its volume is **128**  $\text{cm}^3$ .

### Part B: Matching

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Match each item on the left to the correct answer on the right.

1. Match each item to its correct answer.

|  |                                       |                   |
|--|---------------------------------------|-------------------|
| Bottom $8 \times 5 \times 3$ + Top $4 \times 5 \times 2$     | → <b>160 <math>\text{cm}^3</math></b> | 84 $\text{cm}^3$  |
| Solid $7 \times 4 \times 6$ – Hole $2 \times 2 \times 6$     | → <b>144 <math>\text{cm}^3</math></b> | 90 $\text{cm}^3$  |
| Two stacked: $3 \times 3 \times 4$ and $3 \times 3 \times 6$ | → <b>90 <math>\text{cm}^3</math></b>  | 144 $\text{cm}^3$ |
| Bottom $6 \times 4 \times 2$ + Top $3 \times 4 \times 3$     | → <b>84 <math>\text{cm}^3</math></b>  | 160 $\text{cm}^3$ |