



Volume of Rectangular Prisms

Name: _____

Date: _____

Grade: Grade 5

Part A: Multiple Choice

Circle the best answer for each question.

1. An L-shaped figure is made of two prisms: one $3 \times 4 \times 2$ cm and one $5 \times 4 \times 2$ cm. What is the total volume?

- A) 54 cm^3
- B) 64 cm^3
- C) 48 cm^3
- D) 72 cm^3

2. A rectangular prism has a volume of 240 cm^3 and a base area of 40 cm^2 . What is its height?

- A) 4 cm
- B) 8 cm
- C) 6 cm
- D) 10 cm

3. A pool is $10 \text{ m} \times 5 \text{ m} \times 2 \text{ m}$. How many cubic meters of water does it hold?

- A) 50 m^3
- B) 100 m^3
- C) 200 m^3
- D) 70 m^3

4. If you triple all three dimensions of a $2 \times 3 \times 4$ cm prism, what is the new volume?

- A) 72 cm^3
- B) 216 cm^3
- C) 648 cm^3
- D) 324 cm^3

Part B: Fill in the Blank

Write the correct answer on each line.

1. A step-shaped solid is made of a bottom prism $8 \times 6 \times 3$ cm and a top prism $4 \times 6 \times 2$ cm. The total volume is _____ cm^3 .

2. A planter box is $2 \text{ ft} \times 1 \text{ ft} \times 3 \text{ ft}$. Four identical planters hold _____ ft^3 of soil in total.

3. A prism has a volume of 180 cm^3 . If the length is 9 cm and the width is 4 cm, the height is _____ cm.

4. Two prisms share the same volume. One is $6 \times 5 \times h$ cm and the other is $10 \times 3 \times 4$ cm. The value of h is _____.

5. A shipping container is $12 \text{ m} \times 2 \text{ m} \times 3 \text{ m}$. Its volume is _____ m^3 .

Answer Key • Volume of Rectangular Prisms • Grade: Grade 5

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- C) 648 cm^3
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Part B: Fill in the Blank

Write the correct answer on each line.

1. A step-shaped solid is made of a bottom prism $8 \times 6 \times 3$ cm and a top prism $4 \times 6 \times 2$ cm. The total volume is 192 cm^3 .

2. A planter box is $2 \text{ ft} \times 1 \text{ ft} \times 3 \text{ ft}$. Four identical planters hold 24 ft^3 of soil in total.

3. A prism has a volume of 180 cm^3 . If the length is 9 cm and the width is 4 cm, the height is 5 cm.

4. Two prisms share the same volume. One is $6 \times 5 \times h$ cm and the other is $10 \times 3 \times 4$ cm. The value of h is 4.

5. A shipping container is $12 \text{ m} \times 2 \text{ m} \times 3 \text{ m}$. Its volume is 72 m^3 .