



Volume of Rectangular Prisms

Name: _____

Date: _____

Grade: Grade 5

Part A: Multiple Choice

Circle the best answer for each question.

1. A box is 2 m long, 1 m wide, and 50 cm tall.

What is its volume in cm^3 ? (1 m = 100 cm)

- A) 100,000 cm^3
- B) 1,000,000 cm^3
- C) 10,000 cm^3
- D) 500,000 cm^3

2. Prism A is $8 \times 5 \times 4$ cm and Prism B is $6 \times 5 \times 5$ cm.

Which has the greater volume and by how much?

- A) Prism A by 10 cm^3
- B) Prism B by 10 cm^3
- C) They are equal
- D) Prism A by 20 cm^3

3. A prism has volume 360 cm^3 . If both length and width are doubled, what is the new volume?

- A) 720 cm^3
- B) 1,440 cm^3
- C) 2,880 cm^3
- D) 360 cm^3

4. A cube has a volume of 125 in^3 . What is the length of one edge?

- A) 25 in
- B) 5 in
- C) 10 in
- D) 15 in

Part B: Fill in the Blank

Write the correct answer on each line.

1. A rectangular prism is $3 \text{ m} \times 2 \text{ m} \times 4 \text{ m}$. Its volume in cm^3 is _____ cm^3 .
2. A prism $12 \times 5 \times 4$ cm holds _____ more cm^3 than one that is $10 \times 4 \times 5$ cm.
3. If you triple the height of a $2 \times 3 \times 4$ cm prism, the new volume is _____ cm^3 .
4. A cube with edges of 6 cm has a volume of _____ cm^3 .
5. Two prisms have equal volumes: one is $9 \times 4 \times h$ and the other is $6 \times 6 \times 3$. The value of h is _____.

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

Part A: Multiple Choice

Circle the best answer for each question.

1. A box is 2 m long, 1 m wide, and 50 cm tall.

What is its volume in cm^3 ? (1 m = 100 cm)

- A) 100,000 cm^3
- B) 1,000,000 cm^3
- C) 10,000 cm^3
- D) 500,000 cm^3

2. Prism A is $8 \times 5 \times 4$ cm and Prism B is $6 \times 5 \times 5$ cm.

Which has the greater volume and by how much?

- A) Prism A by 10 cm^3
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- C) They are equal
- D) Prism A by 20 cm^3

3. A prism has volume 360 cm^3 . If both length and width are doubled, what is the new volume?

- A) 720 cm^3
- B) 1,440 cm^3
- C) 2,880 cm^3
- D) 360 cm^3

4. A cube has a volume of 125 in^3 . What is the length of one edge?

- A) 25 in
- B) 5 in
- C) 10 in
- D) 15 in

Part B: Fill in the Blank

Write the correct answer on each line.

1. A rectangular prism is $3 \text{ m} \times 2 \text{ m} \times 4 \text{ m}$. Its volume in cm^3 is 24,000,000 cm^3 .

2. A prism $12 \times 5 \times 4$ cm holds 40 more cm^3 than one that is $10 \times 4 \times 5$ cm.

3. If you triple the height of a $2 \times 3 \times 4$ cm prism, the new volume is 72 cm^3 .

4. A cube with edges of 6 cm has a volume of 216 cm^3 .

5. Two prisms have equal volumes: one is $9 \times 4 \times h$ and the other is $6 \times 6 \times 3$. The value of h is 3.