

Using Volume Formulas

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Formulas for Volume of a Rectangular Prism

$$V = l * w * h$$

$$V = B * h$$



Use either of the volume formulas to help you solve the problems below.

Write a number model to show how you found the volume. You may use a calculator.

- ① The Aon Center in Chicago is a tall square tower. Its base covers an area of about 37,636 square feet. The building is about 1,136 feet tall. What is the volume of the Aon Center?

Volume: about 42,754,496 cubic feet

Number model: $37,636 * 1,136 = 42,754,496$

- ② The Great Wall of China is about 20 feet high and about 15 feet wide. What is the volume of a 1-mile section of the wall? (The whole wall is more than 5,000 miles long!)

Hint: 1 mile = 5,280 feet

Volume: about 1,584,000 cubic feet

Number model: $5,280 * 20 * 15 = 1,584,000$

- ③ The Cathedral of Notre Dame in Paris, France covers an area of 4,800 square meters. The roof is about 43 meters high. What is the volume of the interior of the cathedral?

Volume: about 206,400 cubic meters

Number model: $4,800 * 43 = 206,400$

Practice

Multiply. Show your work.

④ $\frac{2}{3} * 34 =$ $22\frac{2}{3}$

⑤ $72 * \frac{1}{7} =$ $10\frac{2}{7}$