Assignment

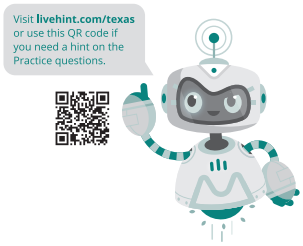
Write

Suppose a rectangular prism has fractional edge lengths. Describe how you can determine the dimensions of cubes that will fill the rectangular prism completely with no overlaps or gaps.

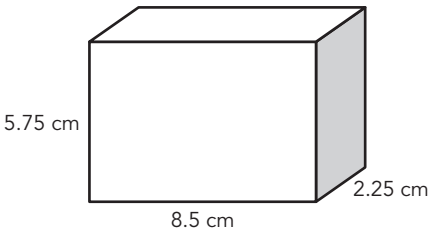
Remember

The volume of a rectangular prism is a product of its length, width, and height:
$V = l \cdot w \cdot h$.

Practice



1. Consider the right rectangular prism shown.

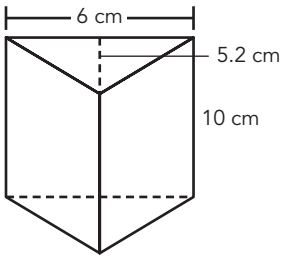


   a. List the numbers of faces, edges, and vertices of the rectangular prism.
   b. Estimate the volume of the rectangular prism.
   c. Calculate the volume of the rectangular prism.

2. Calculate the volume of the rectangular prism with each set of given dimensions.
   a. 7 in. × 4 in. × 2 in.
   b. 5.2 cm × 5.2 cm × 12 cm
   c. 11.3 cm × 3.5 cm × 10.1 cm
   d. 4.5 m × 9 m × 6.7 m
   e. 2.2 ft × 5.5 ft × 15 ft

Stretch

Calculate the volume for the triangular prism.



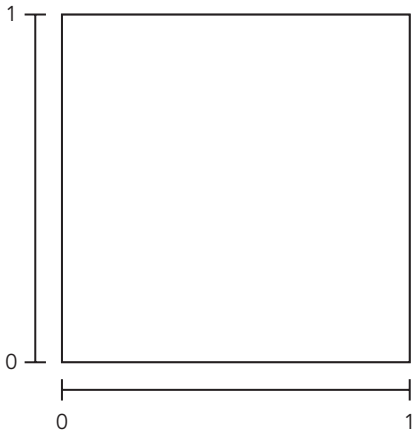
Review

1. Elena wants to put together some of her favorite songs on her computer. She wants to store 60 minutes worth of music. Elena wonders how many songs she will be able to include. She looks online and finds a source that says the average song length is $3\frac{1}{2}$ minutes. If this is true, about how many songs will Elena be able to store? Show your work.
2. Ling is a camp counselor at a local summer camp. She is in charge of the weekly craft activity for 40 campers. Ling plans to make fabric-covered frames that each require $\frac{1}{6}$ yard of fabric. When Ling sets up for her craft activity, she measures the four separate fabric remnants her director gave her. The table shows how much of each fabric she has. How many campers can use plaid fabric? Show your work.

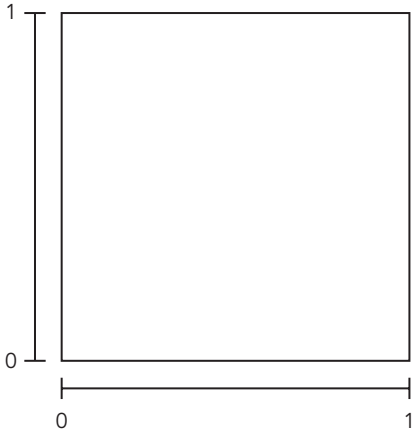
Fabric	Amount (yards)
Plaid	$\frac{11}{12}$
Tie-dyed	$1\frac{7}{9}$
Striped	$2\frac{2}{9}$
Polka-dotted	$1\frac{3}{4}$

3. Represent each product using an area model. Then calculate the product.

a. $\frac{3}{4} \times \frac{1}{3}$



b. $\frac{1}{2} \times \frac{3}{5}$



4. Determine the GCF of each set of numbers.
   a. 72 and 30
   b. 30 and 54

5. Determine the LCM of each set of numbers.
   a. 10 and 12
   b. 8 and 9