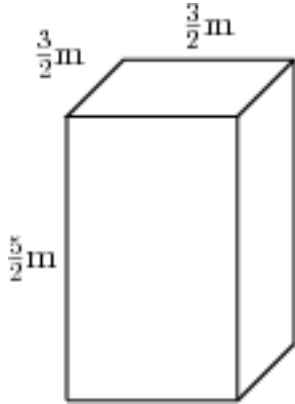


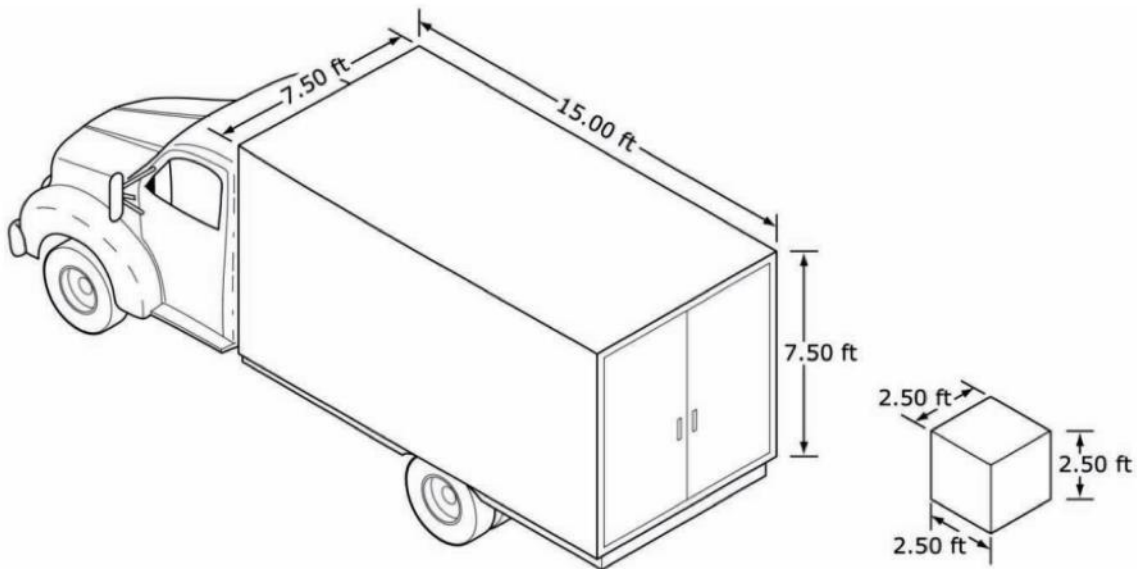
Volume with Fractional Edges

Name _____

1. Macklemore is managing a storage business. He has a small unit available with the dimensions of the figure below. Each standard box is $\frac{1}{2}$ m. on each side. How many boxes will fit in the available space? What is the total volume of the space?



2. Cube-shaped boxes will be loaded into the cargo hold of a truck. The cargo hold of the truck is in the shape of a rectangular prism. The edges of each box measure 2.50 feet and the dimensions of the cargo hold are 7.50 feet by 15.00 feet by 7.50 feet, as shown below.



What is the volume, in cubic feet, of each box?

Determine the number of boxes that will completely fill the cargo hold of the truck. Use words and/or numbers to show how you determined your answer.

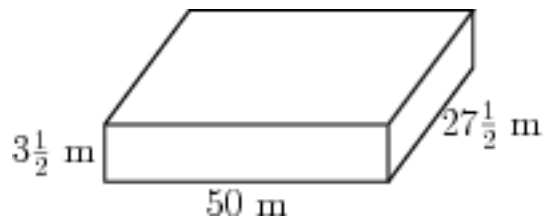
3. Zoe Saldana made rice crispy treats in a $9 \times 13 \times 2\frac{1}{2}$ inch cake pan.

(a) How many $\frac{1}{2}$ in. \times $\frac{1}{2}$ in. rice crispy treats could be cut from the pan?

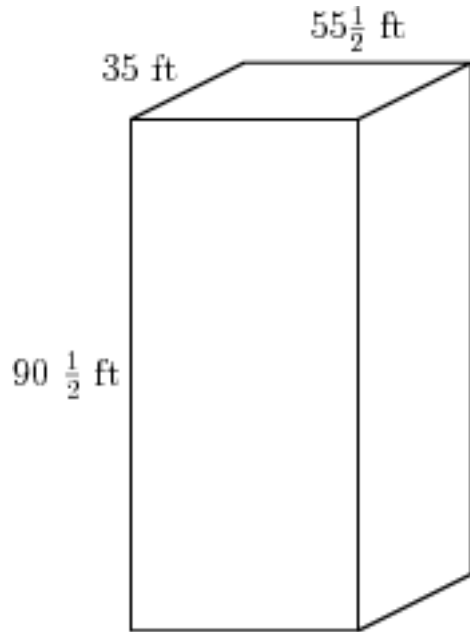
(b) What is the total volume of rice crispy treats?

4. A right rectangular prism has edge lengths $1\frac{1}{3}$ ", 2", and $1\frac{2}{3}$ ". How many cubes with edge lengths $\frac{1}{3}$ " would be needed to fill the prism? What is the volume of the prism?

5. The pool at the London Aquatics Center has the dimensions of the figure below. The pool is drained and refilled every night. What volume of water would be required to fill the pool to the rim?



6. Beyonce is designing an office building with the dimensions of the figure below. Before she orders the air conditioning system, she needs to know the total volume of air that needs to be cooled. What is the total volume of the office building?



7. Leo's recipe for banana bread won't fit in his favorite pan. The batter fills the 8.5 inch by 11 inch by 1.75 inch pan to the very top, but when it bakes it spills over the side. He has another pan that is 9 inches by 9 inches by 3 inches, and from past experience he thinks he needs about an inch between the top of the batter and the rim of the pan. Should he use this pan?

8. Lil Wayne made rice crispy treats in a $9 \times 13 \times 2\frac{1}{2}$ inch cake pan.

(a) How many $\frac{1}{2}$ in. \times $\frac{1}{2}$ in. rice crispy treats could be cut from the pan?

(b) What is the total volume of rice crispy treats?