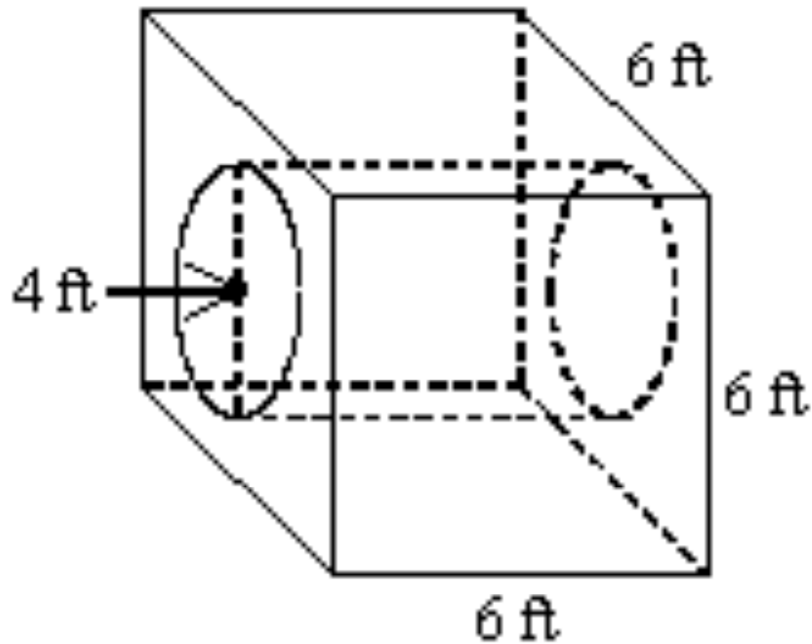


#1

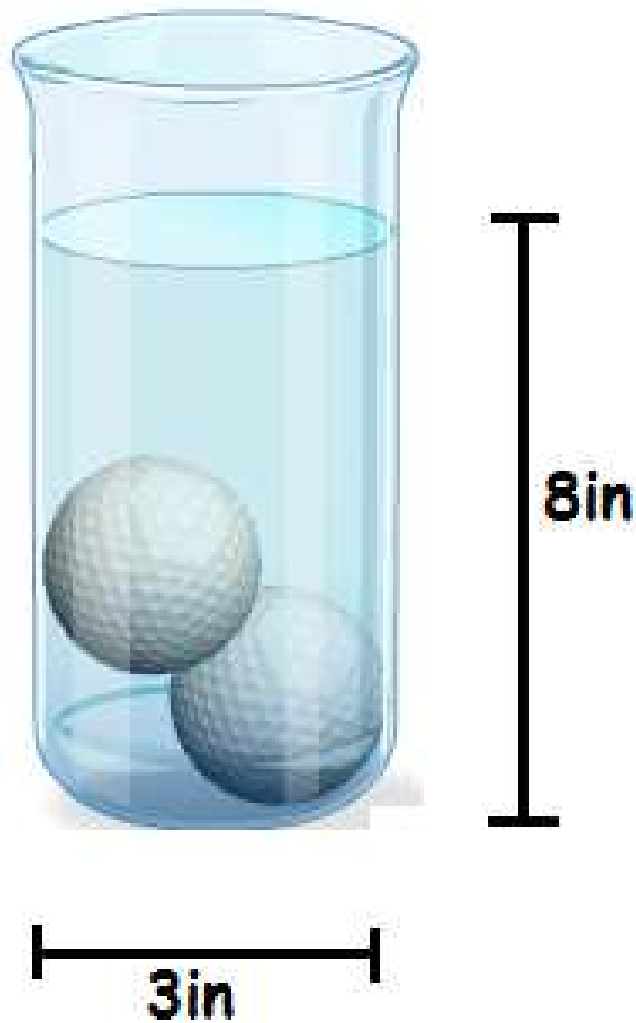
A concrete block has a cylindrical hole 4 feet in diameter drilled through it to allow a pipe to pass through. How many cubic feet of concrete are left in the block? Round your answer to the nearest tenth.



#2

The picture below shows 2 golf balls in a beaker of water. The beaker of the cylinder has a diameter of 3 inches, and is full of water up to 8in with 2 golf balls in it. If the radius of a golf ball is 0.85in, what is the volume of just the water?

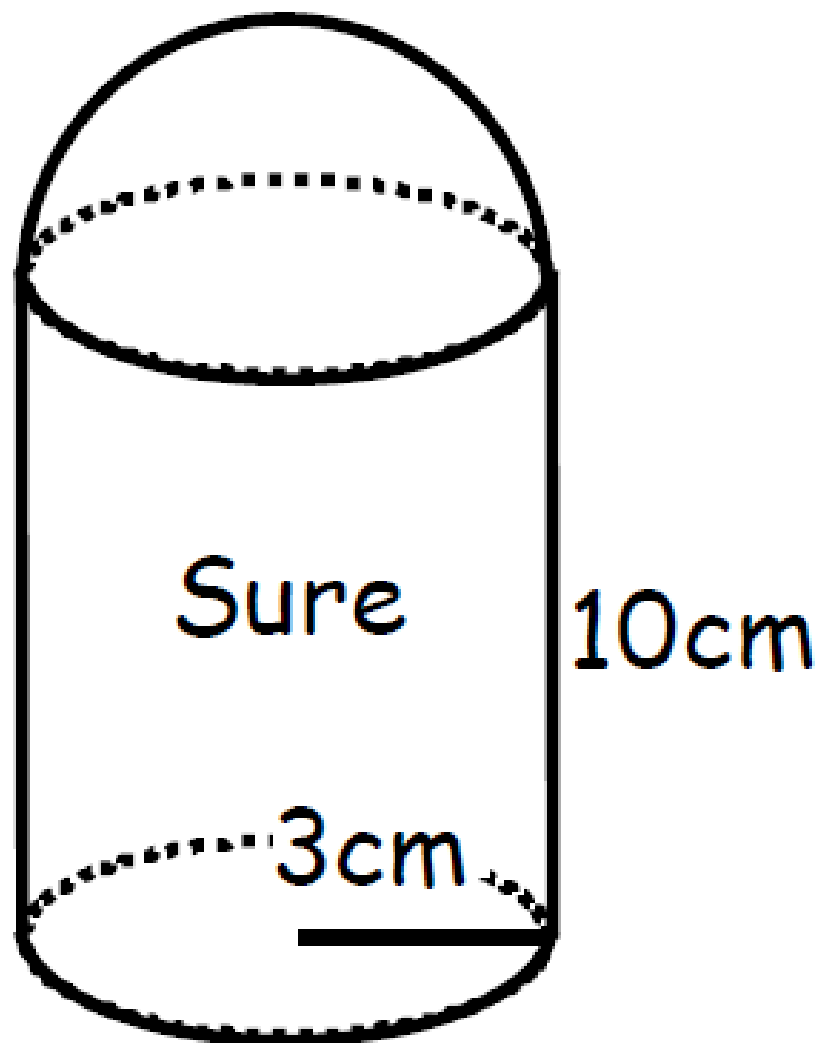
Round your answer to the nearest tenth.



#3

A stick of Sure Solid deodorant is shown to the right.

Find the amount of material (surface area) needed to construct the container.

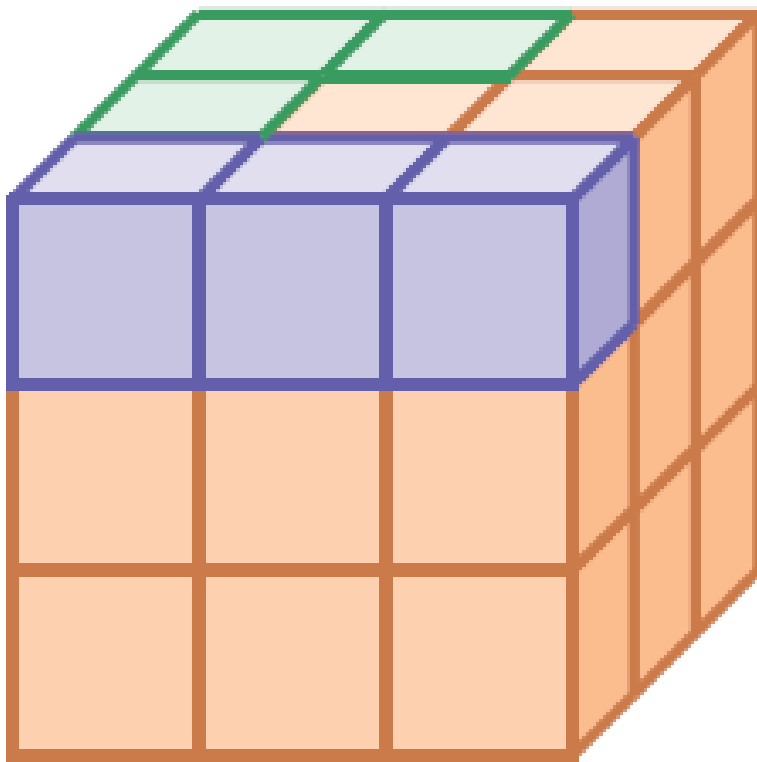


#4

The cube shown is formed with 27 identical cubes. All the cubes you cannot see in the picture are orange cubes.

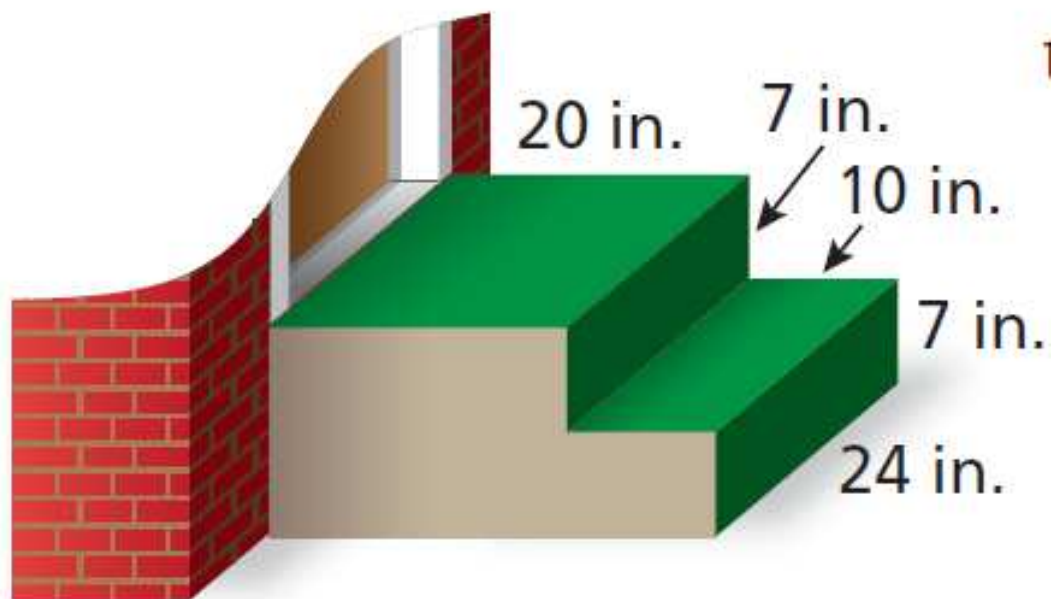
What is the surface area of the object formed by *just the green cubes*?

What is the surface area of the object formed by *just the purple cubes*?



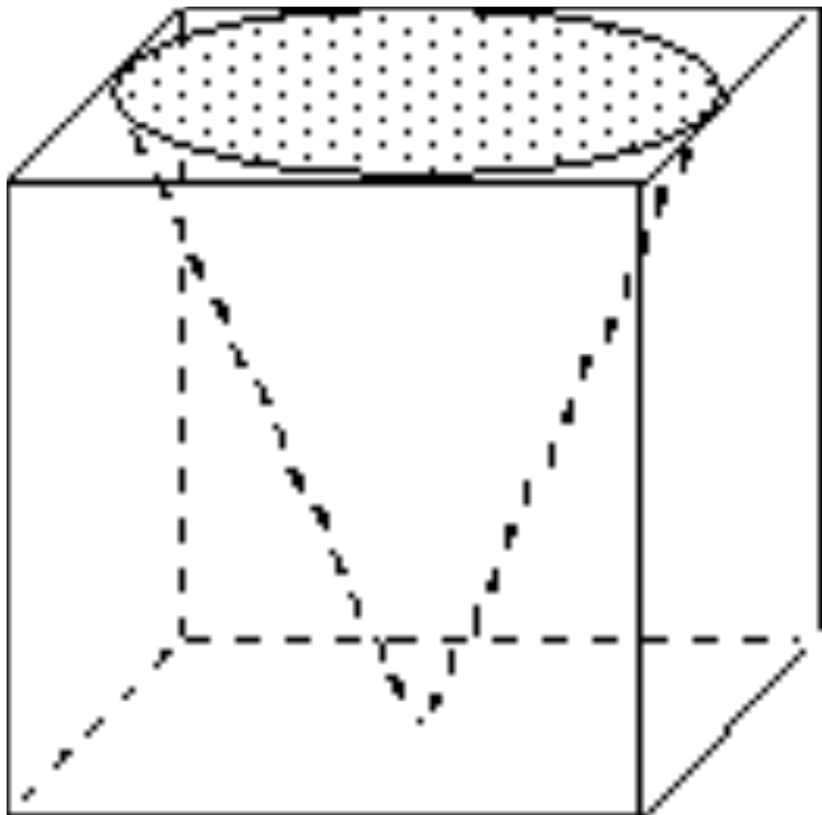
#5

You painted the steps to an apartment green. A diagram of the steps is shown, and all the parts you painted are shown. How much paint did you use? (surface area of the painted regions)



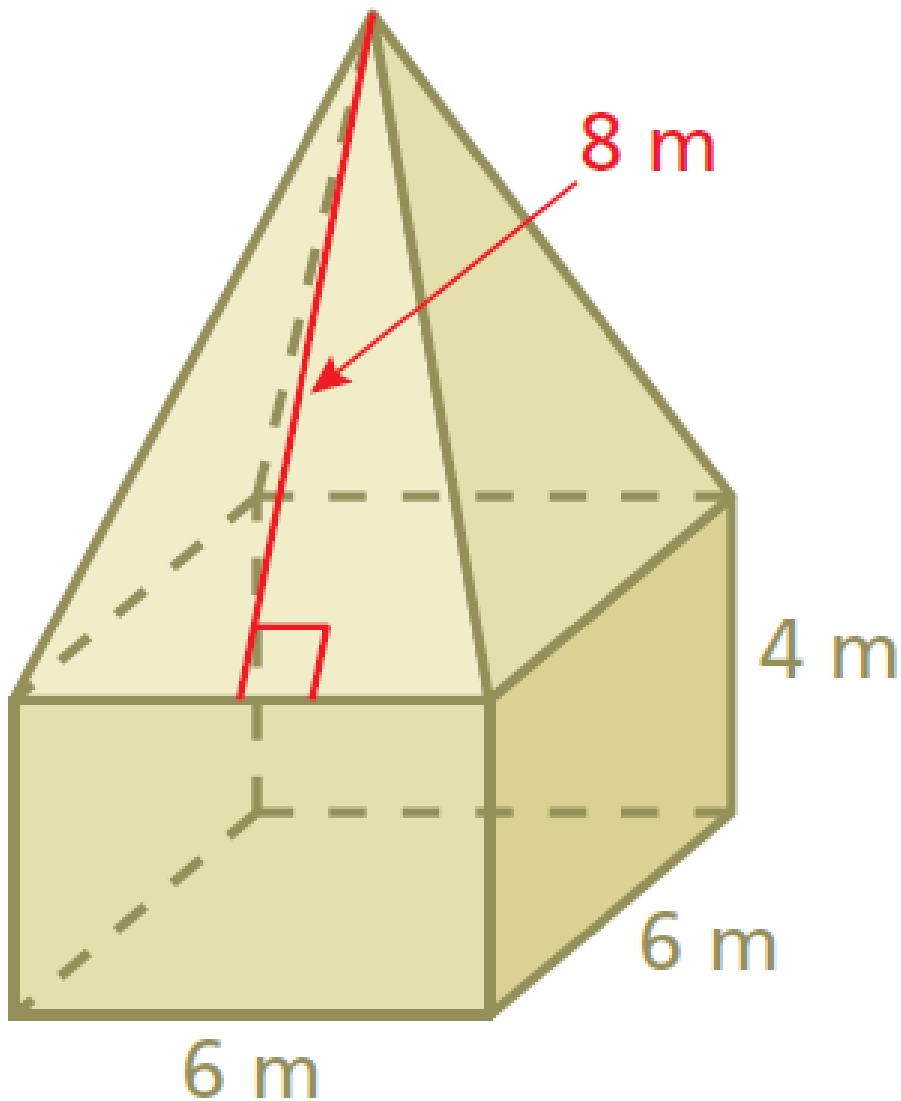
#6

A machinist drilled a conical hole into a cube of metal as shown. If the cube has sides of length 8 cm, what is the volume of the metal after the hole is drilled? Round to the nearest tenth.



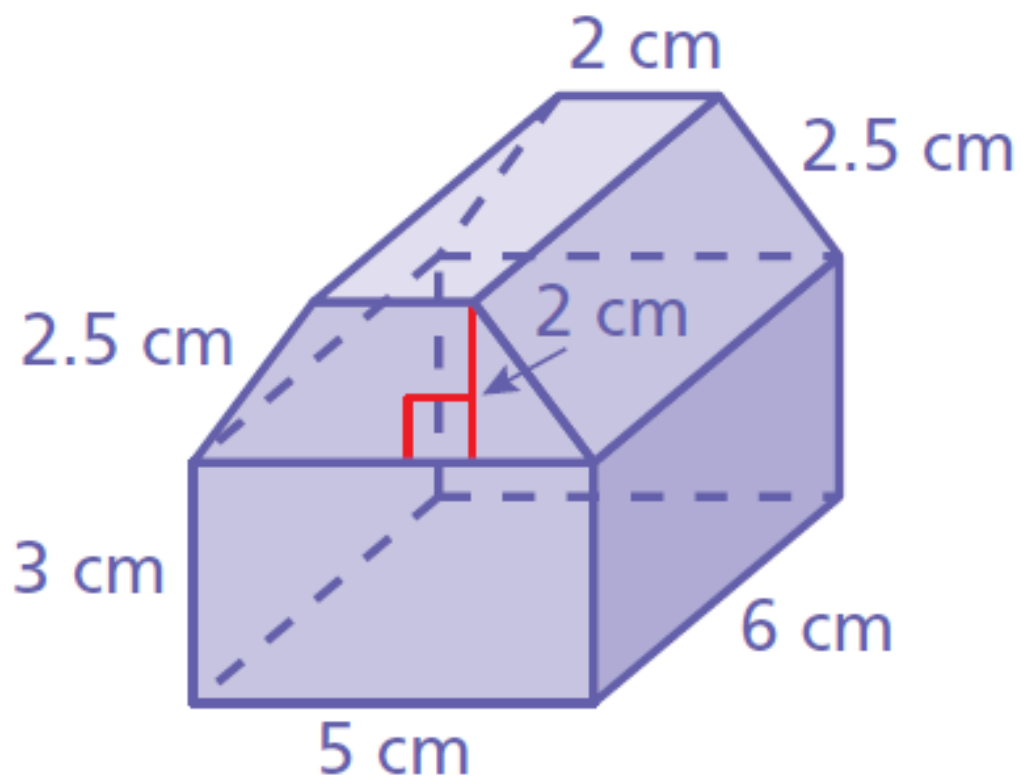
#7

The box shown is a candy container with a square base and a pyramidal top. How many square inches of pasteboard are need to make the box, not counting any overlapping edges?



#8

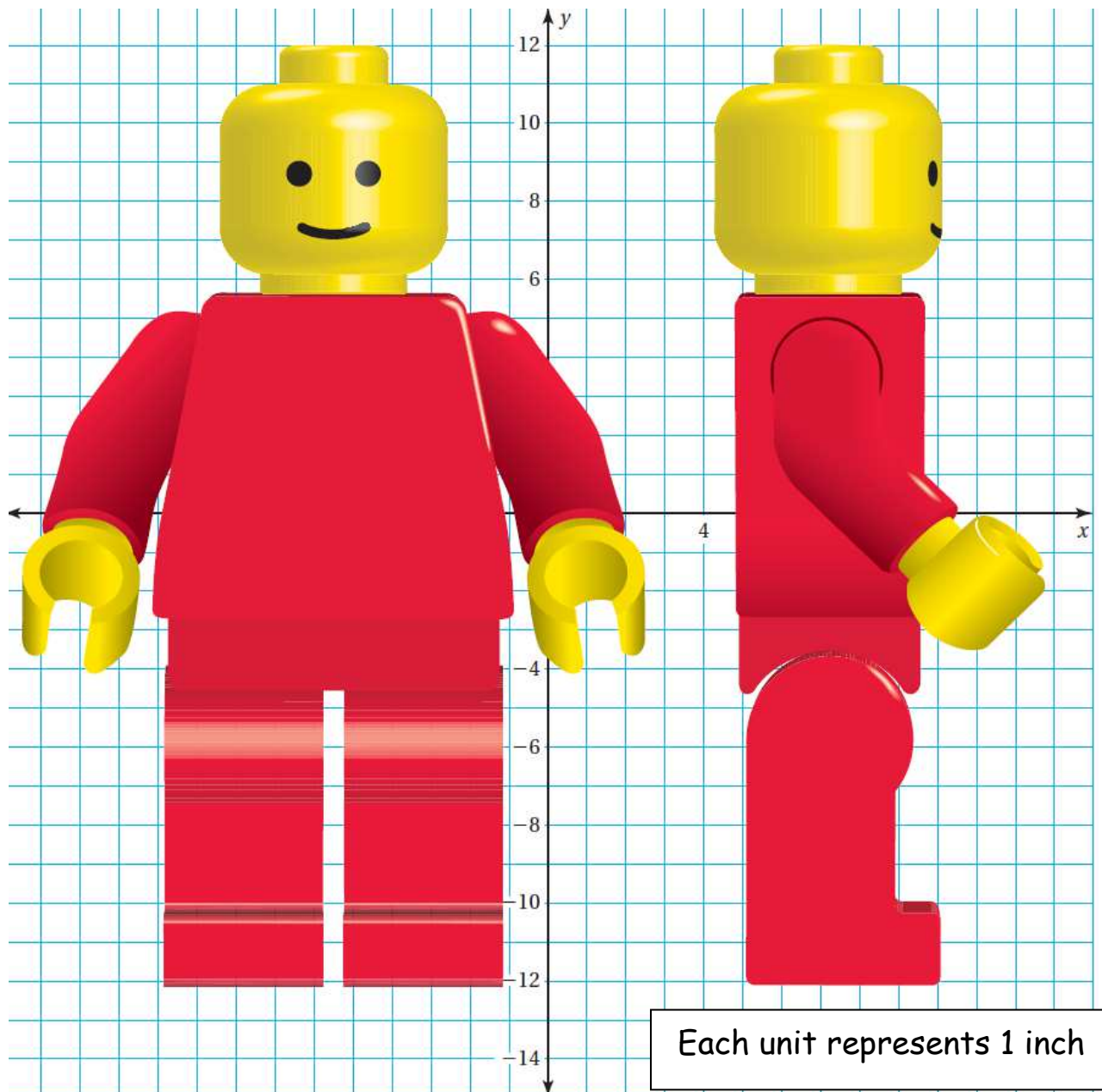
Find the volume of the toy house shown:



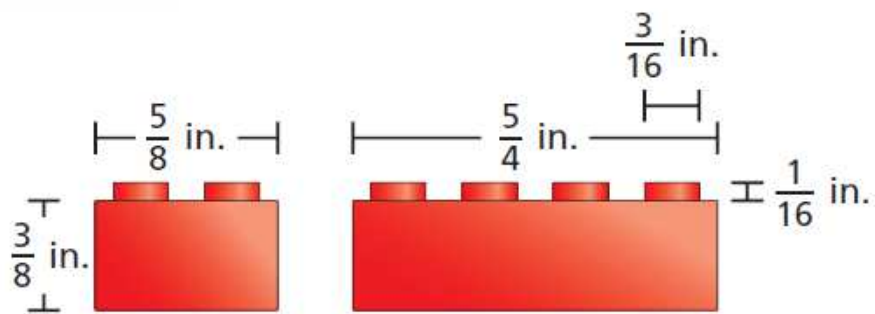
#9

Use the diagram below to estimate the volume of the **HEAD** of the giant lego-man shown.

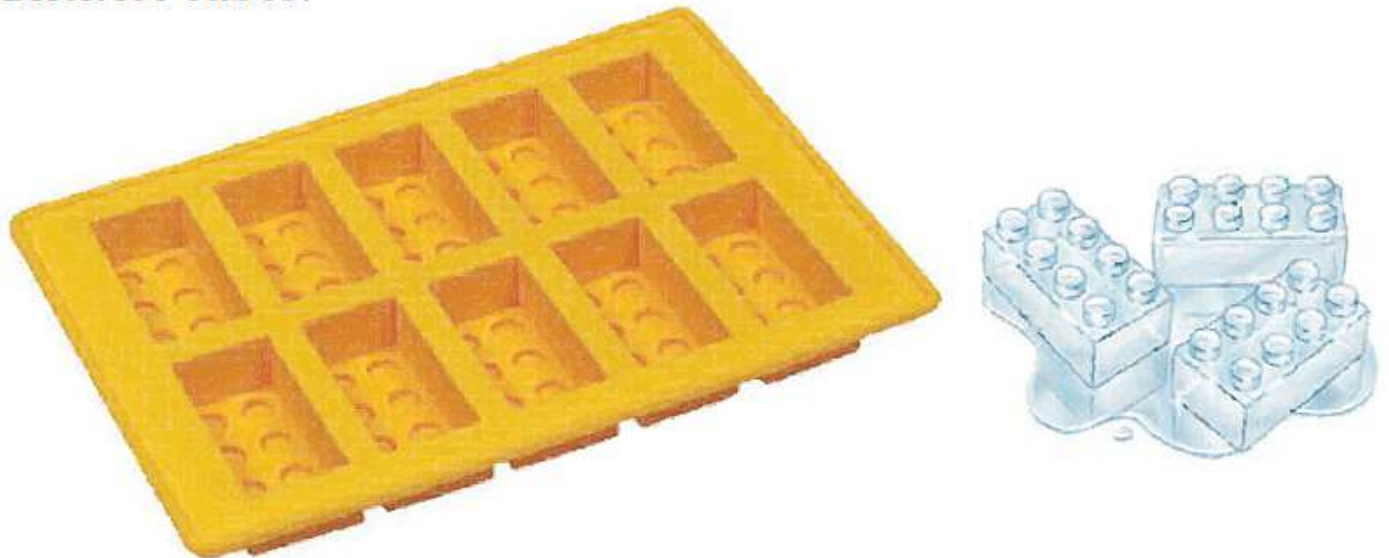
(you must be within 5% of the actual value for credit)



#10

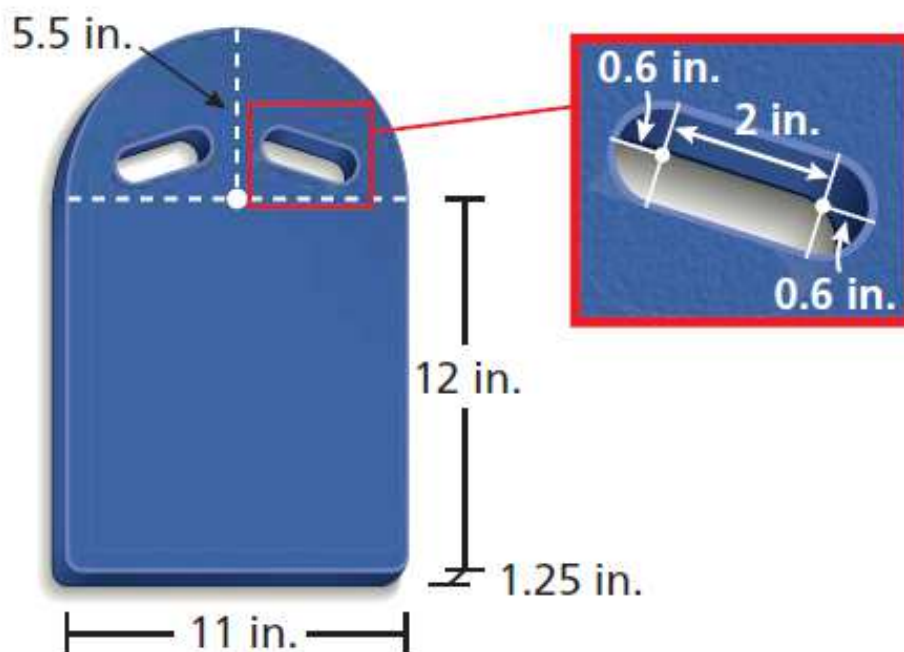


How much water, in cubic inches, would it take to make ten LEGO® Brick ice cubes?



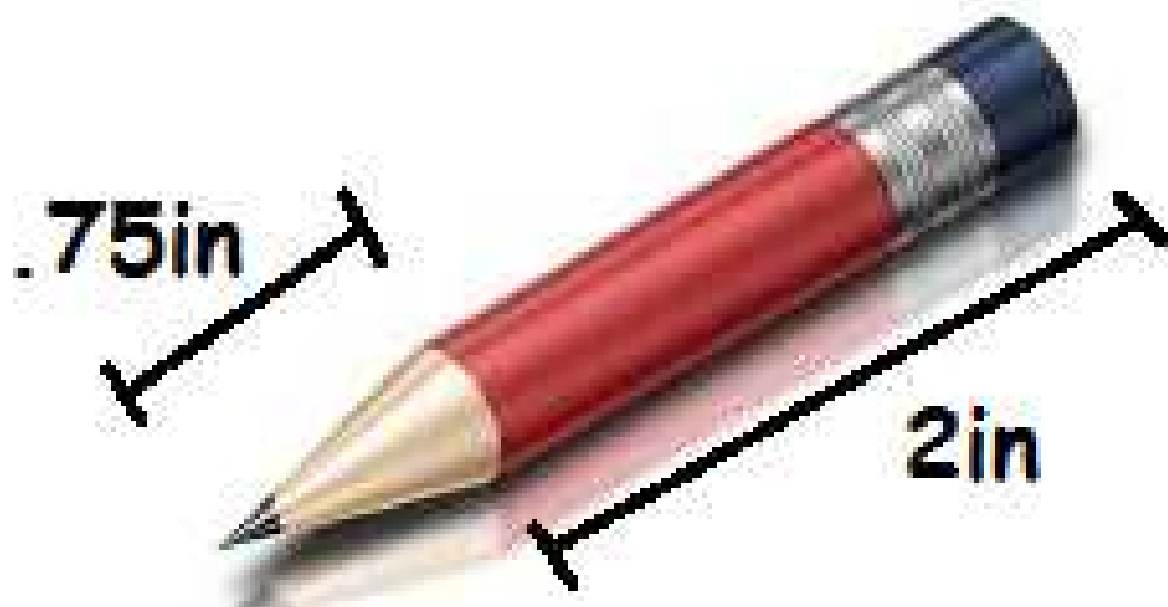
KICKBOARD A foam kickboard used for swimming has two identical hand grips.

- Find the volume of the kickboard.
- One cubic inch of foam weighs about 0.007 pound. How much does the kickboard weigh?



#12

Find the volume of the pencil shown if the radius of the pencil is 0.25cm.



#13

Mr. B's basement is 20 ft wide and 18 feet long.
It filled with water 3 ft deep...

1. How many cubic feet of water is in the basement?
2. If there are 7.5 gallons in a cubic foot, how many gallons of water are in the basement?



#14

The weight of 1 cubic foot of water is 62.5lbs.



If this tank
(1x2x3) is full
of water, how
much will it
weigh?

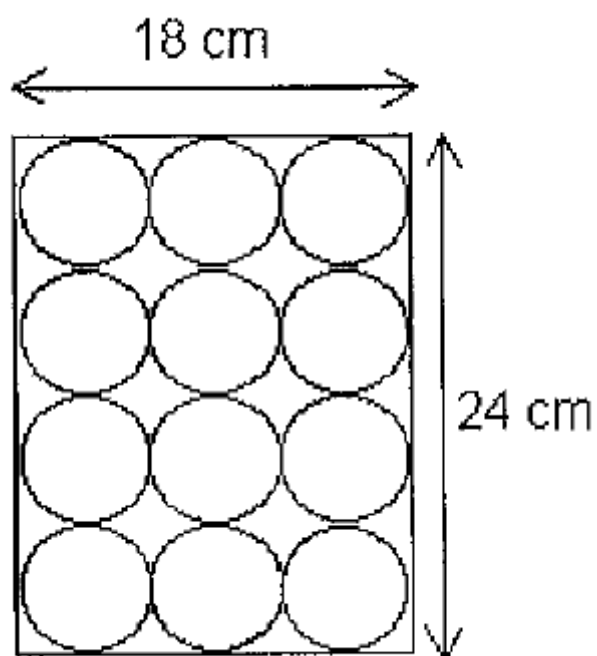
#15

Planet X is covered in alien slime. If the planet has a radius of 1,000 miles, and the slime covers 72% of the planet, what is the surface area of the slime?



#16

Cans of _____ are often packed in boxes like the one shown below. What percent of the box is wasted space? (Calculate by area)



#17

How much material (surface area) is the smallest cube that can hold a regulation basketball? (a regulation basketball has a 4.7 inch radius)

