




11-4 Solve It!



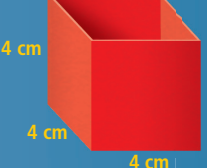


Getting Ready!


A yellow 1 cm-by-1 cm-by-1 cm cube is shown below. How many of these cubes can you fit in each box? Explain your reasoning.



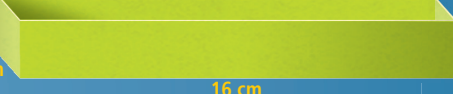
1 cm
1 cm
1 cm



4 cm
4 cm
4 cm



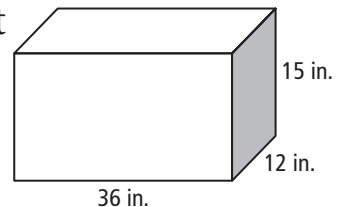
8 cm
4 cm
2 cm



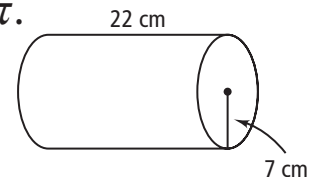
16 cm
2 cm
2 cm

11-4 Lesson Quiz

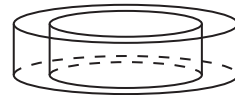
1. An aquarium has the dimensions shown at the right. What is the volume of the tank?



2. Find the volume of the cylinder in terms of π .



3. **Do you UNDERSTAND?** A machinist creates a spacer by drilling a 3 cm diameter hole through the middle of a cylinder that has a diameter of 5 cm and a height of 0.5 cm. What is the approximate volume of the finished spacer?



Answers

Solve It!

4 by 4 by 4: 64 cubes; you can cover the bottom with 4 by 4 = 16 cubes, and you can fit 4 such layers.

2 by 16 by 2: 64 cubes; you can cover the bottom with 16 by

2 = 32 cubes, and you can fit 2 such layers.

2 by 4 by 8: 64 cubes; you can cover the bottom with 2 by 4 = 8 cubes, and you can fit 8 such layers.

Lesson Quiz

1. 6480 in.^3
2. $1078\pi \text{ cm}^3$
3. about 6.3 cm^3