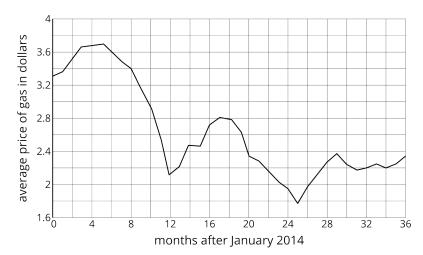


Lesson 20 Practice Problems

1.	a. A cube's volume is 512 cubic units. What is the length of its edge?
	b. If a sphere fits snugly inside this cube, what is its volume?
	c. What fraction of the cube is taken up by the sphere? What percentage is this? Explain or show your reasoning.
2. Sp	ohere A has radius 2 cm. Sphere B has radius 4 cm.
	a. Calculate the volume of each sphere.
	b. The radius of Sphere B is double that of Sphere A. How many times greater is the volume of B?
	hree cones have a volume of 192π cm 3 . Cone A has a radius of 2 cm. Cone B has a dius of 3 cm. Cone C has a radius of 4 cm. Find the height of each cone.
(Fr	rom Unit 5, Lesson 16.)



4. The graph represents the average price of regular gasoline in the United States in dollars as a function of the number of months after January 2014.



- a. How many months after January 2014 was the price of gas the greatest?
- b. Did the average price of gas ever get below \$2?
- c. Describe what happened to the average price of gas in 2014.

(From Unit 5, Lesson 5.)

5. Match the description of each sphere to its correct volume.

1.
$$288\pi \text{ cm}^3$$

2.
$$\frac{256}{3}\pi \text{ cm}^3$$

3.
$$36\pi \text{ cm}^3$$

4.
$$\frac{2048}{3}\pi$$
 cm3

6. While conducting an inventory in their bicycle shop, the owner noticed the number of bicycles is 2 fewer than 10 times the number of tricycles. They also know there are 410 wheels on all the bicycles and tricycles in the store. Write and solve a system of equations to find the number of bicycles in the store.

(From Unit 4, Lesson 15.)